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# THE BRITISH EMPIRE

THE GEOGRAPHY RESOURCES COMMERCE

LAND-WAYS AND WATER-WAYS

OF THE

British Dominions Beyond the Seas

WITH FULL INDEX

BY

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EDUCATION IN THE UNIVERSITY OF ST. ANDREWS

*NINTH AND IMPROVED EDITION*

*Revised and brought up to date*

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Great Empire! fast bound by invisible band,  
 That convey to earth's limits thy rulers' commands;  
 Who sittest alone by thy rude northern sea,  
 On an ocean-built throne, the first home of the free,  
 Whom thy tall chimneys shroud in a life-giving gloom;  
 Who clothest mankind with the work of thy loom;  
 Who o'er all seas dost send out thy deep-laden ships;  
 Who teachest all nations the words of thy lips;  
 Who despatchest thy viceroys imperially forth  
 To the palms of thy East and the snows of thy North;  
 Who holdest vast empires of dark subtle men  
 By the might of just laws and the sword of the pen;  
 Who in thy isle-continent, yearly increased,  
 Rearest empires of freemen to sway the far East;  
 Who art set on lone islets of palm and of spice,  
 On deserts of sand and on mountains of ice;  
 Who bring'st Freedom where'er thy flag is unfurled;  
 The example, the envy, the crown of the World!

LEWIS MORRIS.

Sons and brothers that have sent from isle and cape and continent,  
 Produce of your field and flood, mount and mine, and primal wood;  
 Works of subtle brain and hand, and splendours of the morning land;  
 Gifts from every British zone: Britons, hold your own!

Britain's myriad voices call, "Sons, be welded each and all,  
 Into one imperial whole, one with Britain, heart and soul;  
 One life, one flag, one fleet, one throne: Britons, hold your own!

TENNYSON.

To give space for wandering is it  
 That the world was made so wide.

GOETHE.

Gold and iron are good to buy iron and gold;  
 All earth's fleece and food for their like are sold.  
 Boded Merlin wise, proved Napoleon great,  
 Nor kind nor coinage buys aught above its rate.

EMERSON.



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TO

SIR WILLIAM HART DYKE, BART., M.P.

VICE-PRESIDENT OF THE COMMITTEE OF COUNCIL ON EDUCATION.

SIR,

*Every loyal subject of Her Majesty will probably, on thinking over the education of the young Briton, come to the conclusion that there are two elements in that education which cannot be dispensed with. The first of these is the knowledge of the great deeds and good and industrious lives that have been led by Englishmen and Englishwomen, and of the steady courage, thought, and enterprise in building up this Empire, that have been shown by our great ancestors.*

*The second is the knowledge of the vast resources and infinite variety of the different parts of the great Empire of which he is a member.*

*Into what a world of TIME he has been born, into what a world of SPACE he has been born,—what noble men and women have created for him the conditions under which he lives,—what immense opportunities the possession of the better half of the planet offers to his energies,—these two things it is well for him to know and to know thoroughly.*

*In one word, HISTORY and GEOGRAPHY are the two main pillars of the Education of the British people. The one enables him to add to that stock for which England has always been famous—I mean the growth of character; the other proves to him that there are for every Englishman born into this island as great opportunities as ever existed in any past age.*

*This little book is a small contribution to the latter of these subjects; and I beg that you will be so kind as to allow me to dedicate it to you.*

*And I have the honour to be, Sir,*

*Your obedient, faithful servant,*

J. M. D. MEIKLEJOHN.



PRIVY COUNCIL OFFICE,

Feb. 26th, 1891.

SIR,

*I am directed by Sir William Hart Dyke to acknowledge the receipt of your letter of the 24th inst., and to state in reply that he has much pleasure in accepting the Dedication of the Work which you are preparing, from what he regards as an admirable point of view.*

*I am, Sir,*

*Your obedient Servant,*

ALMERIC FITZ ROY.

PROFESSOR MEIKLEJOHN.

## PREFACE

To present a vivid portraiture of the vast EMPIRE OF GREAT BRITAIN, in such a way as to make it quickly seized by the mind and permanently held by the memory, is no easy task.

The variety of scenery, climates, soils, peoples, languages, industries, and pursuits becomes bewildering to the young learner, and is not easy of mastery even by the practised writer. To give an adequate idea of the extent and infinite resources of the British Empire would require not one volume, but twenty or thirty.

The main purpose, however, in study, is the **organisation** of knowledge. It is not enough to put large numbers of facts into pigeon-holes; it is necessary to show the vital connection in these. If the learner has a living idea about any one of the various countries in Her Majesty's Dominions, the new facts he meets with in his reading are easily assimilated by the living idea and become a permanent part of his own mind.

I have tried to bring organisation into this account of the British Empire, and in this way to make it easy for the learner to take a clear survey of its various parts. I have also introduced here and there picturesque descriptions of scenery from books of travel, have tried

to indicate the special life and industries of each colony, and to show the reader how very rich and varied are the parts of the Greater Britain which lie beyond the sea. It is hoped that this will not merely give information, but will inspire in many a longing to take their part in the building of the powerful States that are growing up around the mother-country.

To the AGENT-GENERALS of the various Colonies, I offer my warmest thanks for their great kindness in supplying me with the latest reports and other documents on the state and growth of their respective Colonies. This has enabled me to give information that is not only trustworthy but fresh.

(i) This book is based on my New Geography ; but there are only ninety pages taken from that ; the rest is new.

(ii) It is only the large type in this book that is to be "got up" ; the small type is intended to add interesting details which may or may not be remembered.

(iii) The time given in each case after the LONGITUDE is the time at that particular place when it is noon at London. . . . The places given after the LATITUDE are places in other Continents in about the same latitude.

(iv) The extracts given between quotation points are, for the most part, taken from the official reports of each Colony.

(v) The summaries given under the title of "THE CONDITION OF," etc., are intended to be revised every year and brought up to date.

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This edition has been thoroughly revised and corrected, information having been drawn from the latest official publications of the different Colonies, and from the latest *Statesman's Year Book*. The chapter on AFRICA in particular has been almost entirely rewritten.

M. J. C. M.

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Part I

INTRODUCTORY

THE THREE KINGDOMS

THE facts and figures are the latest obtainable immediately before the Great War, which began in 1914. This has already produced important territorial alterations with respect to the seizure of German Colonies, but it has been thought better not to notice these in the present edition of this book.



THE  
BRITISH DOMINIONS BEYOND THE SEAS  
OR  
THE BRITISH EMPIRE  
INTRODUCTORY

**The British Empire** is the largest Empire on the face of the globe. It is also the wealthiest—that is, it contains the vastest amount and the greatest variety of resources. The sun never rises upon it, and never sets. It stretches through all latitudes, over all longitudes ; it includes all climates, its dominion extends over all the seas and oceans of the world ; it holds the keys of all the water-ways upon the planet ; and every part of it is joined to every other part and to the whole either by lines of steam-ships, or by railways, or by telegraphs. The island which rules this vast and widespread Empire is not a large island ; its size is only one-hundredth part of the Empire itself. Its ships carry half the sea-borne commerce of the whole world. The area of the Empire is the area of nearly three Europes.

(i) The **British Empire** is larger than the Russian by above 2 millions of square miles. Its population is more than three times as large.

(ii) The **area** of the British Empire is 13,153,000 square miles. This is equal to about one-fourth of all the land on the globe.

(iii) The **population** is 434,000,000. This is about one-fourth of all the inhabitants on the face of the globe.

(iv) Its Sovereign is styled King of the **British Dominions Beyond the Seas**.

**2. Its Resources.**—This Empire, lying as it does in all latitudes, furnishes its inhabitants with an almost infinite variety of products ; and the interchange of these gives birth to a commerce immensely greater than the world every saw before the present century. Everything necessary to civilised life and to trade is produced in it. It possesses the greatest wheat granaries in the world ; for wheat is now grown in Australia, Canada, India, South Africa, Egypt, as well as in the island of Great Britain itself. It has the largest wool-markets of the world ; and in wool and wool-manufactures England has been

pre-eminent since the time of Edward III. It possesses the largest and richest timber-forests on the globe. It can boast of the richest diamond-mines. No Empire or country surpasses it in its output of coal, gold, or salt. It stands second only to China in the production of tea; it occupies the third place in the growth of tobacco; and it grows the finest coffee on the face of the globe. It glories in its doctrine and practice of free-trade; and yet it could, if necessary, grow within its own limits quite sufficient food for its own inhabitants. It gives a welcome to all comers, to peoples of every nationality under the sun; and its laws are more just and more justly administered than those of any other country or any other human government.

(i) "The British Empire exceeds the Russian Empire largely in size and vastly in population, and has nearly treble the area of the United States. Its revenue is more than double that of Russia, and nearly three times that of the United States. Its foreign trade greatly exceeds that of the American Union and vastly exceeds that of Russia. . . . In shipping the British Empire surpasses the whole world; but the manufactures of the United States have gained rapidly upon our own, and perhaps equal ours."—DILKE.

(ii) The British Empire surpasses the United States both in the output of coal, and in the extent of its coal-measures; for we have immense coalfields in Canada, in Australia, and in South Africa, in addition to those at home.

(iii) The British Empire is now above the United States in the production of gold—producing nearly half the world's supply.

(iv) In iron the two Powers for long ran a race; but now the iron production of the United States is thrice as much as that of the British Empire.

(v) The British Empire produces half as much wheat as the United States.

(vi) In wool we produce one-third more than the United States, and double the production of Russia.

(vii) "The United States has more than double the railway mileage of our Empire."

(viii) "The foreign possessions of Great Britain, alike in area, in population, in promise for the future, surpass tenfold those of all the other European powers put together. . . . The colonial empire of Britain is as varied in its composition as it is vast in its extent. . . . The colonies proper vary in character from a settled country, with a civilisation more than a century old, like Lower Canada, to an unexplored wilderness of savages, like New Guinea; from the continent of Australia to the rock of Gibraltar; from Hong-Kong, the emporium of Chinese trade, to Heligoland, the favourite watering-place of Hamburgers."—COTTON.

(a) HELIGOLAND was ceded to the German Empire in 1890.

(b) The island of ASCENSION, in the Atlantic, is "borne as a ship on the books of the Admiralty."

**3. The Commercial Position of Britain.**—Not only does Great Britain rule over the largest extent of territory and the largest

number of people, it occupies easily the first place as regards **manufactures** and **commerce** of all the nations on the face of the globe. Great Britain is the first manufacturing country in the world. It is also the leading commercial nation; and the other nations, if they follow, follow far behind. Again, though Great Britain is a very small country, her mineral resources are greater than those of any other country, with the single exception of the United States. But the United States is nearly as large as the whole of Europe.—This leading position of Great Britain in regard to manufactures and commerce is due to the unique combination of a number of circumstances which have never come together before, in all the previous history of civilisation. The chief of these circumstances, among many others, are the immense quantity of cheap power she possesses in the shape of coal; the economic application of that power by means of steam; the thoughtfulness, courage, and enterprise of her merchants and manufacturers; the large number of highly-trained, careful, and skilful workmen; the easy and cheap communication by railway, canal, and telegraph; the possession of large capital; and the ever-growing trade of her ever-growing colonial empire.

(i) The following are some of the particular productions in respect of which Great Britain is first:—

- (a) She produces more **textiles** than any other country.
- (b) She is easily first in the manufacture of **metals**.
- (c) She produces more and better **machinery** than any other country.
- (d) She is first in the production of **chemicals** and **paper**.
- (e) She produces more **steel rails** than any other country.

(ii) Of the **tonnage** of all the ships that pass through the Suez Canal Great Britain has 60 per cent. France has only  $5\frac{1}{2}$  per cent.; Germany  $4\frac{1}{2}$ . This is sufficient proof of the leading commercial position of Great Britain; since the Suez Canal is the highway to the whole East.

(iii) As regards minerals, Great Britain produces about a quarter of the whole output of **coal** in the world. She also produces more **salt** than any other country.

4. **Two Classes of Colonies.**—An eminent Geographer<sup>1</sup> has divided the colonies of the British Empire into two classes: **Colonies of Exploitation** and **Colonies of Settlement**. The former are “Plantations;” the latter are “those adapted to receive a new population from the mother-country or elsewhere.” “The former are adapted to a wealthy

<sup>1</sup> Mr. J. SCOTT-KELTIE, Secretary of the Royal Geographical Society, in his very able and interesting work *Applied Geography*, p. 16 (Philip & Son).



country, with no surplus population ; while the latter demand a constant excess of population, as well as a certain amount of capital." Nearly all the foreign possessions of France and Germany and those of Holland are of the former type, while those of England embrace colonies of both types. . . . As a rule, tropical colonies can only be colonies of exploitation or plantations ; because the natives of temperate climates cannot labour in them.

The French word *exploiter* means to use or turn to account the labour and energies of others for one's own purposes.

- (i) Canada, Australia, New Zealand, are Colonies of Settlement.
- (ii) India, the Mauritius, Ceylon, are Colonies of Exploitation.
- (iii) South Africa partakes of the character of both.

## I. LANDMARKS IN THE GROWTH OF THE BRITISH EMPIRE.

"Of all the results of English history none is comparable to the creation of this enormous, prosperous, in great part homogeneous, realm ; and it can be paralleled by nothing in the history of any other state."—PROFESSOR SEELEY.

1. **Introductory.**—The story of the growth of the British Empire is the story of the expansion of the Anglo-Saxon race. It began with the first gropings of Henry VII. in the end of the 15th century. The 16th century saw it grow into something more vigorous and hopeful with the discovery and settlement of Newfoundland in 1583 ; and it is Newfoundland that can claim to be the first British colony in our Empire. The 17th century brought with it the disputes between sovereigns and people which culminated in the Civil War and the execution of Charles I. in 1649 ; and the danger to their civil and their religious liberties induced the Puritans to emigrate when the Royalists were too strong for them, while the Royalists left the country when the Cromwellians succeeded in rising to power. Added to these political causes, we must not forget the great revival of maritime enterprise in the end of the 16th and the beginning of the 17th century, at the close of the reign of Queen Elizabeth. The close of the 18th century saw the French defeated in the East and in the West—in India and in Canada, saw Great Britain strong at home and abroad, in spite of the enormous and irreparable loss of the subjects and the territory included in the

United States. The nineteenth century proved to be a period of steady growth and of continuous consolidation of the British Empire ; and most of this growth and consolidation took place since the accession of Queen Victoria in 1837. From 1837 to 1897—the Diamond Jubilee of Queen Victoria—the population of the British Colonies multiplied itself more than fourfold ; while the external trade, in spite of periods of depression, multiplied itself nearly ninefold.

(i) **John Cabot** (or Giovanni Cabotto, a pilot of Venice) settled as a merchant in Bristol towards the end of the 15th century. He was sent out by Henry VII., under letters-patent, in the year 1497, on a voyage of discovery. He sighted **Cape Breton Island** and **Nova Scotia**, and was thus the discoverer of the mainland of North America.—His son, Sebastian Cabot (born in Bristol in 1474), was Inspector of the Navy under Edward VI., and was the prime mover of the Expedition of Merchant Adventurers which opened up to England a profitable commerce with Russia.

(ii) Under the Commonwealth, many Royalists, who detested the person and the rule of Cromwell, emigrated to North America, and settled the **Carolinas** (North and South). The Cromwellians, who emigrated in the reign of Charles II., generally went farther north, to New England. Hence it is that the people of the "Southern States" of America are aristocratic, conservative, and attached to the Episcopal Church. Much of the life, habits, and manners of the English of the 18th century may, even in the present day, be seen in some of the Southern States.

(iii) The reign of Queen Victoria witnessed the extension and consolidation of British rule in **India** ; the enormous development of **Australia** under the stimulus of the great gold discoveries ; the foundation of the **Dominion of Canada** ; the extension of British rule and of British influence in **South Africa** ; the establishment of those great commercial stations for Eastern Trade, **Hong-Kong** and **Singapore** ; and the foundation and maintenance of a girdle of **coaling stations** round the whole planet.

**2. Main Causes of Growth.**—The seafaring instinct of Britons, implanted by the insular character of the country (with the sea looking in on most of our counties), combined with the increase in the population of Great Britain, has gradually sent our people to different parts of the world to seek for new land and new markets. The enormous breadths of land in Canada, Australia, and other continents lying unused, on the one hand, and the crowding and overpressure of population, on the other, have led, more especially in the 19th century, to an ever-growing impulse towards emigration and a constant rise in the scale of colonisation. Greater Britain is "for the most part," says Professor Seeley, "very thinly peopled and very imperfectly developed, a young country, with millions of acres of

virgin soil and mineral wealth as yet but half explored ; it has abundant room for all Englishmen, and can find homesteads for them all, for the most part in a congenial climate and out of the reach of enemies. England now is a realm 13 million square miles in extent—a realm so young and in so early a stage of its development that the greater part of it is not yet peopled ; a realm which will yet require much organisation, many new institutions, but which has been furnished by Nature with an incomparable road-system connecting together the principal countries which compose it, namely, the sea.” Nor must we regard the countries that compose the Empire of Great Britain as simply so many colonies producing goods for interchange with the products of the mother-country, as so many great commercial stations. “These products are no more a measure of the greatness of the colonies than the mother-country itself could be fairly represented by a tabular statement of its manufactures. The colonies are something more than corn-fields, or sheep-runs, or timber-forests. The men that send us these products, like ourselves, form societies. They have churches and governments, parliaments, universities, and schools. They are great communities in an early stage ; and there is no reason why the names of New Zealand or Victoria should not one day sound as impressively in the ears of men as the names of England or France, Italy or Greece.”

**3. Landmarks.**—The following are the most important dates in the history of the **British Empire** :

**1. Newfoundland the first colony . . . . . 1583**

Sir Humphrey Gilbert, a half-brother of Sir Walter Raleigh, took formal possession of Newfoundland in August 1583, in the name of Queen Elizabeth. His ship foundered on his return. “The general, sitting abaft in the ‘Squirrel,’ with a book in his hand, cried out unto us in the ‘Hind,’ ‘We are as near to Heaven by sea as by land.’ The same Monday night the frigate’s lights went suddenly out.” The *Squirrel* was a “frigate” of only 10 tons.

**2. Virginia was settled as a colony in . . . . . 1607**

James I. reigned  
from 1603 to 1625.

VIRGINIA was called after Elizabeth, the “**VIRGIN QUEEN**.”

(i) The shores of Virginia were first explored by Sebastian Cabot (a son of John Cabot) in 1498. In 1584 Sir Walter Raleigh took possession of it and named it after

his patron and queen. But it was not till 1607 that a colony of English gentlemen, mostly of no occupation, settled at Jamestown, on the James river, under a charter which they received from the London Company.

(ii) **Virginia** was the first state to urge the Declaration of Independence in 1776; and she was also the first state to secede from the United States in 1861.

3. **Massachusetts**, the first of the "New England" States, was settled in . . . . . 1620

4. **Maryland**, etc., settled in . . . . . 1636

Charles I. reigned  
from 1625 to 1649.

**MARYLAND** was called after Henrietta Maria, the wife of Charles I.

5. **Jamaica** was taken from the Spaniards in . . . . . 1655

Commonwealth from  
1649 to 1660.

6. **New York** and **New Jersey** wrested from the Dutch in . . . . . 1674

Charles II. reigned  
from 1660 to 1685.

7. **Gibraltar** taken from the Spaniards in . . . . . 1704

Anne reigned  
from 1702 to 1714.

(i) **Gibraltar** was taken by a combined British and Dutch fleet under Sir George Rooke.

(ii) It was besieged by the Spaniards and French from 1779 to 1782, but without success. Since then, it has remained unmolested in the hands of Great Britain.

8. Beginning of our **INDIAN EMPIRE** in . . . . . 1757

George II. reigned  
from 1727 to 1760.

(i) This (1757) is the date of the **Battle of Plassey**, which was won by Clive with 3200 men from Surajah Dowlah, with 50,000. This was the beginning of British power in Bengal—and then in India.

(ii) This battle is one of the "decisive battles of the world."

9. Beginning of our possessions in **CANADA** in . . . . . 1759

(i) This (1759) is the date of the **Capture of Quebec** by General James Wolfe. From this time the hold of France on North America grew weaker and weaker.

(ii) In 1763, by the **Treaty of Paris**, France ceded to us Canada, Cape Breton; and Nova Scotia, together with several islands in the West Indies.

Thirteen United States of America secede from British Government in . . . . . 1776

George III. reigns  
from 1760 to 1820.

10. First settlement of **New South Wales** in . . . . . 1788

(i) The first settlement was a penal settlement on Port Jackson, near Botany Bay. The prisoners, after serving out their time, or receiving a pardon, became settlers.

(ii) Transportation to New South Wales was stopped by the colonists in 1840.

11. **Ceylon** taken from the Dutch in . . . . . 1796

12. **Malta** taken from the French in . . . . . 1800

13. **Tasmania** settled in . . . . . 1803

(i) **Tasmania** was first called Van Diemen's Land, after Van Diemen, the governor of the Dutch East Indies, who sent Tasman on his voyage of discovery.

(ii) **John Tasman** (born at Hoorn in Holland) discovered New Holland (now called Australia), New Zealand, and Tasmania.

14. **Cape Colony** taken from the Dutch in . . . . . 1806

(i) Holland was at this time part of the French Empire; we were at war with France.

(ii) The Dutch themselves recognised in 1814 our possession of the Cape.

15. **Mauritius** taken from the French in . . . . . 1810

16. **Singapore** purchased from the Maharajah of Johore in 1824

George IV. reigned  
from 1820 to 1830.

(i) **Singapore** is a very fertile island which commands the Straits of Malacca and the Eastern Seas.

(ii) It was purchased by the East India Company.

17. **Assam**, etc., taken from Burmah in . . . . . 1826

18. **West Australia** settled in . . . . . 1826

(i) This was a settlement with convicts and prisoners.

(ii) The territory was created a separate colony in 1829; and in the same year **Perth**, its capital, was founded.

19. **Port Phillip** settled in . . . . . 1836

William IV.  
reigned from  
1830 to 1837.

(i) **Port Phillip** (now called **Victoria**) was at this time part of New South Wales.

(ii) Sir Richard Bowles despatched Mr. Stewart from Sydney, with the title of "Superintendent of Port Phillip," to establish a regular government.



20. **Aden** taken in . . . . . 1839

Victoria began  
to reign in 1837

(i) The Sultan of Aden used to maltreat shipwrecked mariners.

(ii) **Aden** is the key to the Red Sea, is a strong navy station, and an important coaling station.

21. **New Zealand** becomes a British Colony in . . . . . 1840

22. **Hong-Kong** ceded by the Chinese in . . . . . 1842

(i) **Hong-Kong** is an island at the mouth of the river Canton.

(ii) It is said to be the key of the Northern Pacific. It is at any rate the headquarters of European finance in Eastern Asia, and the principal commercial entrepôt of Southern China.

23. **Natal** made a British Colony in . . . . . 1843

24. **Sind**, in North-West India, annexed in . . . . . 1843

25. The **Punjab**, in North-West India, annexed in . . . . . 1849

26. **Vancouver Island** made a Crown Colony in . . . . . 1849

It was leased by the Government for ten years to the Hudson Bay Company.

27. **Victoria** made a separate colony in . . . . . 1851

It received its present Parliamentary constitution in 1855.

28. **Oude** formally annexed in . . . . . 1856

29. **British Columbia** made a colony in . . . . . 1858

(i) **British Columbia** was, previously to this date, practically under the control of the Hudson Bay Company.

(ii) The discovery of gold in 1858 brought to this district a great rush of miners and others; and it was made a Crown Colony.

(iii) It became part of the Dominion of Canada in 1871; and was joined with the other States in 1885—the year of the completion of the Canadian Pacific Railway.

30. **Queensland** becomes a separate colony in . . . . . 1859

It had before been a part of New South Wales.

31. Dominion of Canada established in . . . . . 1867

Diamonds discovered in South Africa.

32. **Fiji Islands** annexed in . . . . . 1874

33. **Cyprus** occupied (by agreement with Turkey) in . . . 1878
34. **British North Borneo Company** chartered in . . . 1881
35. **British occupation of Egypt** . . . . . 1882
36. **Niger Coast Protectorate** established in . . . . 1884
37. **Gold discovered in Western Australia** in . . . . 1886

**Upper Burmah** annexed.

**Royal Niger Company** chartered.

Out of the Company's territories have grown the protectorates of Northern and Southern Nigeria.

38. **East African Company** chartered in . . . . . 1888

**Start of the British East Africa Protectorate.**

39. **British South Africa Company** chartered in . . . . 1889

The Company has added Rhodesia—750,000 square miles—to the British Empire.

40. **Patriotic Demonstrations in Australia and New Zealand** on the occasion of the German Emperor's telegram to Kruger on the defeat of Jameson . . . . . 1896

41. **Diamond Jubilee of QUEEN VICTORIA** . . . . . 1897

Colonial premiers entertained in London

42. **Soudan reconquered** in . . . . . 1898

**Capetown to Cairo railway reaches Bulawayo.**

43. **Second Transvaal War** . . . . . 1899-1902

(i) Contingents contributed by every corner of the British Dominions beyond the Seas.

(ii) The first Transvaal war was fought in 1880-1, at the end of which Great Britain restored to the Boers their independence. We first annexed the Transvaal in 1877.

44. **The Commonwealth of Australia** established in . . . 1901

45. **The Union of South Africa** established in . . . . 1910

The Union includes the once self-governing colonies of the Cape of Good Hope, Natal, the Transvaal, and the Orange River Colony.

**4. Acquisitions according to Reigns.**—The following are the chief colonisations and annexations made by England (or Great Britain), arranged according to the reigns in which they were made :—

(i) The chief territory annexed during the reign of Elizabeth (1558-1603) was **Virginia** in North America.

(ii) In James I.'s reign (1603-1625) the most important lands added to the possessions of England or settled by Englishmen were: **The Bermudas**; **Massachusetts**, the first "New England" state; and **Barbados**, in the West Indies.

(iii) The reign of Charles I. (1625-1649) saw the **Bahamas**; **Connecticut** (another "New England" state); **Maryland**; and **Rhode Island** (now the smallest of the United States) added to our possessions.

(iv) During the Commonwealth (1649-1660) the most important additions were: **North Carolina** (settled by Englishmen who were displeased with Cromwell's rule; and **Jamaica** (which we wrested from the Spaniards).

(v) In the reign of Charles II. (1660-1685) the chief additions made were as follows: **Delaware** (one of the "Southern States" of North America); **South Carolina** and **Pennsylvania** (both settled by Englishmen); **New York** and **New Jersey** (which were wrested from the Dutch).

(vi) The only land of any importance taken during the reign of Queen Anne (1702-1714) was the rock of **Gibraltar**.

(vii) In the reign of George II. (1727-1760) the chief additions made were: **Georgia** (which was settled by Englishmen); the foundation of our **Indian Empire** laid by Clive; and **Canada** (wrested from the French by Wolfe).

(viii) The long reign of George III. (1760-1820) saw very numerous additions, the most important of which were: **Florida**, in North America (taken from Spain); **New South Wales** (made first a penal settlement); **Ceylon** (taken from the Dutch); **Malta** (wrested from the French); **Guiana**, in South America (taken from the Dutch); **Cape Colony** (taken from the Dutch in 1806); **Mauritius** (wrested from the French); the **Ionian Islands** (ceded to England in 1815—the year of the Battle of Waterloo).

(ix) The short reign of George IV. (1820-1830) saw the following additions: **Singapore** (a commercial position of the first importance); **Assam** and some neighbouring provinces in India; **Western Australia** (which was settled by the British).

(x) William IV.'s reign (1830-1837) saw the partial colonisation of **Victoria** and of **South Australia** (the capital—Adelaide—was called after his Queen).

(xi) During the long reign of Queen Victoria (1837-1901) the largest and most wealthy additions were made—chiefly in India, Africa, and Australasia. The most important of these are: in **Canada**—**British Columbia**; in **Africa**—**Natal**, **Lagos**, **Nigeria**, **Ashanti**, **Zululand**, **British East Africa**, **British Central Africa** (Rhodesia and Nyassaland), **Orange River Colony**, and **Transvaal**; in **Australasia**—**New Zealand**, **Queensland** (as a separate colony), **New Guinea** (south-eastern portion), **Fiji**; in **India**, the *East Indies*, etc.—**Sind**, **The Punjab**, **Oude**, **Burmah**, **Singapore**, **Aden**, **Hong-Kong**, **Cyprus**, **North Borneo**, and **Wei-Hai-Wei**.

## II. THE CONSTITUTION OF THE BRITISH POSSESSIONS.

1. **How acquired.**—The wide and wealthy regions now held by Great Britain in all parts of the world have been acquired in three ways : (i) By **force of arms** ; (ii) by **purchase** ; and (iii) by **settling** on the unoccupied ground and cultivating it.

As examples of the first, we may give the **Cape** and **Hong-Kong**. The second would embrace **Lagos**, off the west coast of Africa, which was purchased from its king in 1861. The annexation by the settlement of industrial colonists is exemplified in **Australia**, **New Zealand**, and **British Columbia**.

2. **How administered.**—The colonies in the British Empire have three different kinds of constitution. The first class is called **Crown Colonies**. The second class consists of those which possess **representative institutions**, but **not responsible government**. The third class possesses **representative institutions and a responsible government**—that is, a government which is responsible to the inhabitants of the colony, and which may therefore be removed or changed by them at any time. This last class is practically independent of home control.

(i) The **Crown Colonies** are ruled by public officers appointed by the Crown (=the Government in London) and responsible only to the Crown. To this class belong **Ceylon**, **Hong-Kong**, **Gibraltar**, etc.

(ii) In colonies which, though possessing representative institutions, have no responsible government, the Crown appoints and controls the chief public officers. The Crown has also a veto on legislation. Such are **Jamaica**, **Mauritius**.

(iii) In the third class, the Crown appoints no officer except one—the **Governor** ; and he has a veto on legislation, which however is seldom if ever exercised. To this class belong **Canada**, the **Australian Commonwealth**, **New Zealand**, the **South African Union**, and **Newfoundland**. All these have their own Parliaments, their own Cabinets, their own executive officers, just like Great Britain itself.

(iv) Outside the three classes of colonies proper are **Protectorates**, *e.g.* **Uganda** and **North Borneo**, and “**Spheres of Influence**”—*e.g.* the “**Hinterlands**” in Africa—both of which are governed by the Colonial Office ; and the great **dependency of India**, which is governed by a Viceroy and Council.

3. **Colonial Business in London.**—The great colonies have each an **Agent-General** who resides in London, who manages the chief political business of his colony there, and who acts as a kind of ambassador to the Home Government. The Colonial Secretary for the time being consults each Agent-General on all matters which affect the colony he represents ; and he also calls meetings of all the Agents-General for the purpose of discussing affairs which pertain to the British colonies

as a whole. In 1887, the first great colonial Conference was held in London. The Agents-General were present ; delegates appointed by each of the Colonies also attended ; and the Secretary for the colonies acted as President. Commercial questions, legal questions, inter-colonial questions, and especially the all-important question of the defence of our colonies against attack by sea, were fully and patiently discussed. A rough agreement was reached : the self-governing colonies to enrol and maintain a militia for self-defence by land ; Britain to supply men-of-war and guns for fortresses to defend the commercial navy and the coaling-stations on the highways of British commerce.

(i) The Dominion of Canada, New South Wales, Victoria, S. and W. Australia, Queensland, New Zealand, Tasmania, and the Cape Colony, have each an Agent-General resident in Westminster, near the House of Commons.

(ii) The above agreement regarding the share of defensive measure to be taken by the Home Government and each colony was embodied in an Act of Parliament passed in 1888.

4. **The Future of our Colonies.**—Professor Seeley says : “The time is certainly not far distant when of these new states, some of which are of yesterday, many will equal the European States, which they will surpass in natural wealth and equally diffused prosperity. . . Just as the difficulty of communication checked the growth of states in the Middle Ages, so the unprecedented facility of communication—by railways and telegraphs—which our age enjoys, seems to be creating a new type of state.” The tendency among the British colonies is at present towards federation ; and this important movement took place in Canada in the year 1867. The second great colonial federation was **The Commonwealth of Australia** in 1901, and the third, the **Union of South Africa** in 1910.

(i) British Columbia did not join the Dominion of Canada till 1871 ; nor Prince Edward Island, till 1873. It was the promise of the Canadian Pacific Railway that induced Columbia to join.

(ii) New Zealand stands aloof from the Commonwealth, as Newfoundland does from the Dominion.

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### III. FOOTHOLDS AND COALING STATIONS.

1. **Growth of the British Empire.**—The Empire of Great Britain had been continuously growing for more than three hundred years. The reign of Queen Elizabeth saw the beginning of our long process of

colonisation. In the year 1583 Newfoundland was made a colony. In the year 1584, Sir Walter Raleigh discovered Virginia, and took out with him a number of settlers. But these men gave up their foothold, returned to this country ; and it was not till the year 1607—the fourth of the reign of James I.—that the permanent settlement of Jamestown, on the James river (in Virginia), was founded. New Plymouth, founded by the “Pilgrim Fathers,” was the first permanent colony of “New England.” It was founded in 1620. In the year 1760, when George III. ascended the throne of the United Kingdom, Great Britain held only a few posts in North America, Africa, and India. The population of the whole British Empire, the colonies included, did not amount to 12,000,000 souls. It now numbers more than 434,000,000. By far the greatest increase, both in territory and in population, has taken place since the accession of Queen Victoria in 1837 ; but there are several well-marked stages in the growth of our Empire.

2. **Stages.**—The first stage is the period of Queen Elizabeth, when great navigators like Drake and Hawkins brought back to London news of the most wonderful discoveries of unheard-of peoples, unseen lands, and civilisations thousands of years older than our own. The second stage is to be found in the period of the Commonwealth and the reign of Charles II. In that period the power of England at sea grew with rapid strides ; and we succeeded in outstripping our rivals the Dutch and the Spaniards. Blake, under Cromwell, wrested Jamaica from the Spaniards ; the Dutch had to give up their chief foothold in North America—New Amsterdam (now called New York) ; the States of Carolina and Pennsylvania were founded ; and Bombay, on the west coast of India, was acquired from Portugal by the marriage of Charles II. with Catharine of Braganza. The third stage—in the reigns of George II. and George III.—was the most important in our colonial and commercial history ; because it gave us a fixed footing in Canada and in India. This was the decisive stage ; for, if we had lost our footing in these two continents, the British Empire would have been developed in very different directions, or would not have been developed at all. This was the period from 1756 to 1763. France was beaten in North America and in India ; Spain handed over to us the rich colony of Florida. It was not by large armies that these footholds were won ; it was by the courage of



a few determined Englishmen, led by men like Clive and Wolfe, and backed by a navy that controlled the sea. The wars with Napoleon developed the power, the skill, and the energy of our navy ; and the close of the Napoleonic wars saw the opening of the fourth stage in the development of our Colonial Empire. The fourth stage begins with the Peace of 1815—after the battle of Waterloo ; and it is the stage of **Emigration**. The second and third stages had been stages of **Conquest**. Bad harvests, the falling-off of trade, the weight of the National Debt and the consequent increase of taxation, the invention of new machines, had increased the number of the unemployed, and had turned their eyes towards lands where food was cheaper and labour more plentiful. This fourth stage may be divided into two sub-stages : (i) that from 1815 to 1837 ; and (ii) that from 1837 to the present time. In 1815 only about 2000 persons left this country ; in 1912, more than 467,000 emigrated to other lands. This is a number as large as the whole population of Sheffield.

(i) In 1815, the emigrants from the United Kingdom numbered	2081
In 1819, they amounted to	34,987
In 1912, they amounted (British subjects only) to	467,666

(ii) In the 40 years between 1861 and 1901 there left these shores 7,729,230 British subjects—or half as many again as the population of the whole of Scotland.

**3. The Office of Great Britain.**—The settling of our fellow-countrymen in many parts of the globe, the development of our carrying-trade (which is now more than half that of the whole world), the application of steam to ocean-going vessels, and the laying of submarine telegraphs in all the seas and oceans of the world have, under the care of Divine Providence, brought it about that the people of Great Britain are now the traders and news-carriers for the whole world. These functions have given us another office, have forced upon us another mission. This is to keep the **Water-ways** of the world—the water-ways in ocean, sea, lake, river, and canal—open for the use of the ships of all the nations of the world. Great Britain is therefore the **Guardian of Water-ways**. We have another business thrust upon us—a business just as important, but very much more delicate. It is to keep the telegraphic service—that is, the nervous system of the globe—in good order and at the command of every peaceful nation. Great Britain has now so many footholds in different



parts of the navigable globe, that she could put several telegraphic girdles round the world, the ends and connecting links of which should in every instance rest only upon British soil—only upon land that belongs to herself.

A plan for this was proposed in 1870, and laid before Mr. Robert Lowe, the then Chancellor of the Exchequer. But Mr. Lowe was one of those statesmen who thought that the best use of our colonies was to get rid of them. They cost money; they imposed labour and trouble; and they were very ungrateful.

4. **Footholds.**—England, as a sea-power, early trained many of her subjects to a sea-life. This has caused Englishmen to visit every country under the sun. By settlement or by conquest, the English (and afterwards the British) Government continued to gain for itself a footing on the most desirable parts of the most desirable continents. Where an Englishman gets in his little finger, he manages to put in his whole body; and when his whole body has got in, he draws a large number of other Englishmen after him. The footholds we gained, however small and narrow at first, have by degrees grown into vast territories, which are destined to organise themselves in time into powerful empires. The foothold which Clive gained for us in India by the Battle of Plassey in 1757, proved to be the beginning of our INDIAN EMPIRE. The foothold won by Wolfe in 1759, only two years after, proved to be the minute germ of the vast and wealthy DOMINION OF CANADA (a territory nearly as large as Europe). The occupation of Cape Colony in 1806 was the beginning of the development of a SOUTH AFRICAN EMPIRE, which in no long time will be one of the wealthiest in the world. And not only have we seized on lands to hold and to cultivate them: we have taken possession of islands in every sea and in every ocean; and we have taken these for the purpose either of holding them as **telegraphic stations** for the transmission of news, or as **coaling-stations** for the promotion of commerce and for the guarding of the highways of that commerce against the possible attacks of foreign ships-of-war.

5. **Coaling Stations.**—Professor Seeley says that the British Empire “has been furnished by nature with an incomparable road-system connecting the principal countries which compose it—namely, the sea.” It was at one time believed that seas separated countries; it is now seen that they join them. For carriage by sea is always the cheapest mode of carriage we have; the sea-road costs nothing to

repair, for it is never out of repair; and it is sufficiently wide for the use of all. But, as more than two-thirds of our trade is carried on by steam-ships, it is absolutely necessary that there should be stations where vessels can replenish their stores of coal—that is, can lay in a fresh stock of impelling power. These stations lie on the great lines of British trade, and they must also be strongly fortified, so that in time of war they may be able to hold their own against

an enemy. The freights carried every year by all the vessels of Great Britain are worth at least £1,000,000,000 sterling; and, of this sum, at least £150,000,000 are always afloat, most of it being engaged on distant voyages.

In much the same way, in northern countries, the presence of snow, which seems at first to put a stop to all communication, and to block up each householder within his own dwelling, is found to transform the whole country into one broad road—one immense highway, across which sleighs with passengers and goods can be drawn with even more ease than on a macadamised road.

**6. Our Commerce with the East.**—The commerce of Great Britain with the East is now carried on chiefly by means of the Suez Canal; and, as this canal does not admit sailing ships, it follows that the whole of the Eastern trade on this route is done in steam-vessels. The line of coaling-stations on this route is formed by Gibraltar, Malta, Aden, Kurachee, Bombay, Colombo, Rangoon harbour, Singapore, and

Hong-Kong. There are three methods of protecting these coaling-stations: (a) by fixed defences; (b) by floating defences; and (c) by submarine defences, that is, mines and torpedoes. It would



never do to employ the Navy in defending these stations ; for that would be to tie its hands, and to curtail it of half its strength. The function of our Navy is to sweep the ships of an enemy off the face of the seas, to blockade the enemy's ports, to harass his trade, to attack his foreign possessions, and to escort, when required, a fleet of merchant vessels.

(i) A garrison of 6000 men mans the works at **Gibraltar**, and one of 11,000 those of **Malta**.

(ii) **Aden** is 1800 miles from Suez, and 1664 miles from Bombay.

(iii) The **Suez Canal** (which was opened in 1869) is 87 miles long. Of these, 61 miles are actual canal ; and 26 miles lie through the lakes. Over 15,000,000 of tonnage pass through every year ; and of this, 60 per cent. belongs to Great Britain. France comes next, but with only  $5\frac{1}{2}$  per cent. Italy sends only 3 per cent.

(iv) **Kurachee** (or **Karachi**) forms the base of operations for the military defence of the north-west region of India.

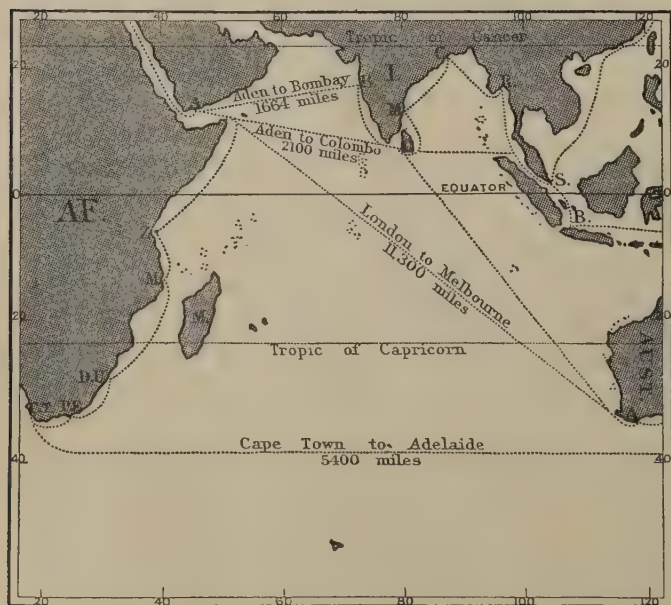
(v) **Bombay** is not only a great coaling-station ; it is the safest harbour in India.

(vi) **Colombo** has an excellent harbour.

(vii) **Rangoon** is, next to **Calcutta**, the busiest port on the Bay of Bengal. It and **Singapore** command either end of **Malacca Straits**.

(viii) **Singapore** supplies to passing steamers about 180,000 tons of coal per annum.

## 7. Our Commerce with the South.—The route to the Cape of



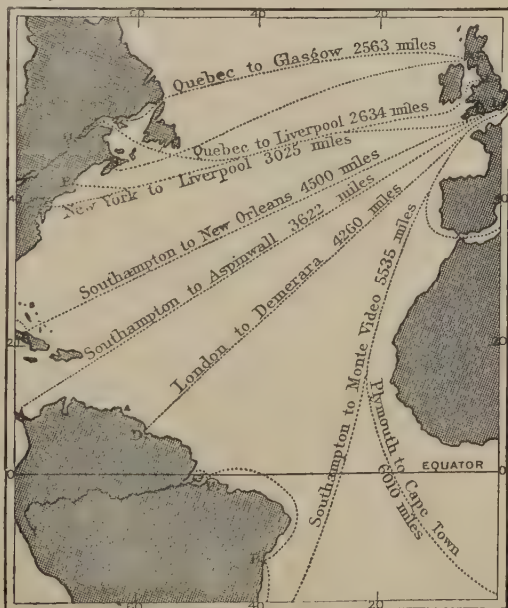
Good Hope is in itself of great value for commerce ; but it possesses a secondary (but still very high) value as the road to the East in case of war. If war broke out in any part of the East, we could not depend on the Suez Canal as our sole means of communication. A sunken barge might close it. Troops and supplies would have to be sent round by the Cape, if Great Britain is to retain her hold on her rich possessions in India, Ceylon, the Mauritius, Singapore and the Straits Settlements, China, and Australasia. But more than this. The value of the British goods that are annually carried to or round the Cape of Good Hope amounts to about £100,000,000 ; and the whole of this trade—with the small deduction of £4,000,000—is done with the United Kingdom. The line of coaling-stations on this southern route is formed by **Lisbon, Gibraltar, Madeira, St. Vincent, Sierra Leone, St. Helena, Simon's Bay, and Port Louis.** Of these stations, Lisbon, Madeira, and St. Vincent do not belong to us ; but, as they are possessions of Portugal, which has always been a friendly Power, they are always available.

(i) **Sierra Leone** has a large and safe harbour, which is strongly fortified.

(ii) **St. Helena** has an excellent roadstead, and is thoroughly fortified. All stores have been removed to this island from Ascension.

(iii) **Simon's Bay**, which lies within False Bay, is the principal station of the British fleet in South Africa.

(iv) **Port Louis**, in the Mauritius, has a large and safe harbour, which is well fortified.



## 8. Our Commerce with the West.—The annual trade of the

North Atlantic—that is, between North America and the United Kingdom—amounts to over £270,000,000. But here coaling-stations are not needed. This ocean is called by sailors “the herring-pond;” the voyage is short; and the triple-expansion engine, by its economy of steam, has lessened the quantity of coal to be carried.—The British trade with the West Indies finds its coaling-stations at **Jamaica** and **St. Lucia**. The latter is the station for the Windward Islands.

**9. Our Commerce with the Antipodes.**—The trade of Great Britain with Australia finds its coaling-stations either on the eastern or on the southern route. In Australia itself, **Adelaide**, **Melbourne**, **Newcastle**, and **Brisbane** are the chief coaling-stations; and they are amply provided with every means of harbour defence—fixed forts, movable flotillas, torpedoes, and naval brigades skilled in the working of these means. In much the same way are the principal ports and coaling-stations of New Zealand protected against the possible attacks of an enemy.

**10. Summary.**—We thus find that, on every ocean highway of commerce, Great Britain possesses coaling-stations at which her merchant-vessels and her men-of-war may recruit their forces and take a new lease of power to conquer winds and waves. The following are the chief coaling-stations:

**I. ON THE EASTERN ROUTE:** **Gibraltar**; **Malta**; **Aden**; **Kurachee**; **Bombay**; **Colombo**; **Rangoon**; **Singapore**; **Hong-Kong**.

**II. ON THE SOUTHERN ROUTE:** (**Lisbon**;) **Gibraltar**; (**Madeira**;) (**St. Vincent**;) **Sierra Leone**; **St. Helena**; **Simon's Bay**; **Port Louis**.

**III. ON THE WESTERN ROUTE:** **Jamaica**; **St. Lucia**.

(i) “**Gibraltar** towers over the water sombre, massive, blue, impregnable, the first of the linked stations on the ‘King’s highway’ to India.”

(ii) “**Malta** possesses one of the finest harbours in the world. It is completely landlocked, and has such an even depth that ships can anchor close to the shore. It is capable of accommodating 500 vessels. Thus the supreme importance of Malta, beyond its fortifications, lies at this day, as of old, in its harbours, which render it a splendid port of call, repair, or refuge, as well as a naval station of the first importance, since its position in the Mediterranean is of the utmost value towards keeping for us a clear highway to India and to the East.”

(iii) “It has been calculated that the aggregate of the fortifications made by the Knights of St. John extend over 25 miles, but Great Britain has, by the addition of modern armaments, completed the great work of fortifying a ‘place of arms’ of almost unrivalled importance, and can survey thence as from a watch-tower the whole of the Mediterranean, from Gibraltar to Smyrna and Port Saïd.”



(iv) "The town of **Aden**, which is very strongly fortified, is on the north-east side of the peninsula, in a deep hollow formed by an extinct crater, and is surrounded by high rocks. Here, in the yawning mouth of what, ages ago, had been the fiery gulf of a great volcano, are the cantonments or military stations, and all around is life and bustle. Aden, as seen from the deck of a vessel, very strongly resembles Gibraltar, except that it has sharply defined peaks."

"All around, above, about, is hard, barren, arid, volcanic rock, calcined, contorted, ejected from ancient earth furnaces, and everywhere exhibiting the dry, drear, colours of extreme heat—brick red, sulphurous yellow, Tartarean black. A faint green tint here and there in the clefts of the sterile hills, where infrequent rain has trickled and dust has lodged, manifests the presence of sparse thorn-bushes, and of the Aden lily, a pretty white-flowering bulb, which is well-nigh the only growing thing redeeming the utter desolation of the landscape."

(v) **Sierra Leone** was chosen on account of its excellent harbour as a coaling station for ships of the Royal Navy, and in the recent report of the Committee on Colonial Defences, it was recognised as a station of much importance.



MALTA.

# THE BRITISH DOMINIONS BEYOND THE SEAS



## EUROPE

NAME OF COLONY	Consti- tution	Area in Square Miles	Population in Thousands 1911
1. Gibraltar (1704), . . .	Cr.	2	20
2. Malta and Gozo (1800), .	Rep.	117	211

Cr. = Crown Colony.

Rep. = Representative Institutions.

Resp. = Responsible Government.

Pro. = Protectorate.

Dep. = Dependency.



## AMERICA

NAME OF COLONY	Constitution	Area in Square Miles	Population in Thousands, 1911
1. Bahamas (1670), . . .	Rep.	4,403	56
2. Barbadoes (1605), . . .	Rep.	166	171
3. Bermudas (1609), . . .	Rep.	20	19
4. Canada (1623—1763), . .	Resp.	3,653,946	nearly 7 $\frac{1}{4}$ m.
5. Falkland Islands (1833), .	Cr.	7,500	3
6. Guiana (1803), . . .	Rep.	109,000	300
7. Honduras (1638—1763), .	Cr.	7,562	40
8. Jamaica and Turk's Island (1655), . . . . .	Rep.	4,193	830
9. Leeward Islands (1623—1783), . . . . .	Rep.	714	140
10. Newfoundland (1583), .	Resp.	40,200	240
11. Trinidad (1797) and Tobago	Cr.	1,868	330
12. Windward Islands (1665—1803), . . . . .	Rep.	508	200

- (i) Canada is nearly as large as the whole of Europe.  
(ii) Guiana is nearly as large as Italy.  
(iii) Newfoundland is one-third larger than Ireland.

## AUSTRALASIA

NAME OF COLONY	Consti- tution	Area in Square Miles	Population in Thousands, 1911
1. <b>Fiji and Rotumah Islands</b> (1874—1881), . . .	Cr.	7,435	130
2. <b>New South Wales</b> (1788), .	Resp.	310,700	1,650
3. <b>New Guinea</b> (1884), . . .	Cr.	90,000 (?)	400 (?)
4. <b>New Zealand</b> (1841), . . .	Resp.	104,471	1,050
5. <b>Queensland</b> (1859), . . .	Resp.	668,497	606
6. <b>South Australia</b> (1836), .	Resp.	380,000	409
7. <b>Tasmania</b> (1803), . . .	Resp.	26,215	191
8. <b>Victoria</b> (1851), . . . .	Resp.	87,884	1,320
9. <b>Western Australia</b> (1829), .	Resp.	975,920	282
10. <b>Pacific Islands</b> , . . . .	Pro.	12,500	200

(i) The five Colonies of Australia, and Tasmania, were federally united in 1901 as **The Commonwealth of Australia**.

(ii) New South Wales has under its jurisdiction **Norfolk Island** and **Lord Howe Island**.

(iii) The Colony of New Zealand includes the following outlying island-groups :—**Chatham, Auckland, Kermadec, and Cook's Islands**.

(iv) The best-known groups of the British Pacific Islands are the **Solomons** (part protected by Germany), the **Gilbert and Ellice group**, **Tonga, Phoenix, and Union Islands**, besides a number of isolated and scattered islets.

## ASIA

NAME OF COLONY	Constitution	Area in Square Miles	Population in Thousands, 1911
1. <b>Aden</b> (1839), . . .	*	80	46
2. <b>Bahrein Islands</b> (1870), .	Pro.	...	...
3. <b>Ceylon</b> (1796), . . .	Cr.	25,364	4,100
4. <b>Cyprus</b> (1878), . . .	Cr.	3,584	275
5. <b>Hong-Kong</b> (1842), . .	Cr.	390 including main-land territory	440
6. <b>India, British</b> (1639—1886),	Dep.	1,087,404	244 millions
7. <b>India, Feudatory States</b> , .	...	709,118	70 millions
8. <b>Labuan</b> (1846), . . .	Pro.	30 $\frac{1}{2}$	8
9. <b>Malay States, Federated</b> (1895), . . .	Pro.	26,300	1 million
10. <b>North Borneo</b> (1881), . .	Pro.	31,000	204
11. <b>Perim</b> (1855), . . .	*	4 $\frac{1}{2}$	...
12. <b>Straits Settlements</b> (1785 —1819), . . .	Cr.	1,500	700
13. <b>Wei-hai-Wei</b> (1898), . .	Dep.	285	160

\* **Aden**, with **Socotra**, **Perim**, **Kuria Muria** Islands, etc., is reckoned as part of **India**, under the Presidency of **Bombay**.

(i) **Ceylon** has jurisdiction over the **Maldivé Islands**.

(ii) To **Hong-Kong** is attached the territory of **Kowloon** on the opposite mainland.

(iii) The area given for **N. Borneo** is for the territory administered by the **British North Borneo Company** only. There is also in **Borneo** a **British Protectorate** over the native states of **Sarawak** (50,000 square miles) and **Brunei** (4000 square miles).

(iv) The **Straits Settlements** have jurisdiction over the **Cocos Islands** and **Christmas Island**.

## AFRICA

NAME OF COLONY.	Constitution.	Area in Square Miles	Population in Thousands, 1911.
1. Ascension Island (1815), .	Administered by Admiralty.	38	One hundred and fifty.
2. Basutoland (1868), .	Cr.	10,293	350
3. Bechuanaland (1885), .	Pro.	275,000	125
4. Nyassaland or Central Africa Protectorate (1891), .	Pro.	300,000	1 million.
5. British East Africa (1888), .	Pro.	184,000	2 $\frac{3}{4}$ millions.
6. British Somaliland (1884), .	Pro.	68,000	300
7. British West Africa (1686—1901), . . . . .	Cr. and Pro.	158,000(?)	20 mill. (?)
8. Cape Colony (1806—1895), .	Resp.	277,000	2 $\frac{1}{2}$ millions.
9. Mauritius (1810), . . . .	Cr.	705	368
10. Natal (including Zululand—1843—1901), . . . . .	Resp.	35,371	1,194
11. Nigeria (N. and S.—1885), .	Pro.	333,000	17 mill. (?)
12. Orange Free State (1900), .	Resp.	48,400	528
13. Rhodesia (1889), . . . .	Pro.	750,000(?)	...
14. St. Helena (1651), . . . .	Cr.	47	3
15. Seychelles (1814), . . . .	Cr.	150	23
16. Transvaal (1900), . . . .	Resp.	117,000	1,686
17. Uganda (1894—1896), . .	Pro.	223,000	2 $\frac{1}{2}$ millions.

In addition to the above, Great Britain owns the islands of Socotra, Tristan d'Acunha, the Chagos Archipelago, etc.

(i) The old Crown-Colony (to be distinguished from the present Protectorate) of Bechuanaland was incorporated with Cape Colony in 1895.

(ii) British East Africa includes the Witu and Zanzibar Protectorates

(iii) British West Africa consists of the three Crown-Colonies, Gambia, the Gold Coast, and Sierra Leone, and their protected "hinterlands."

(iv) Rhodesia (also called Zambesia) is divided into two parts—Northern and Southern. Northern Rhodesia is sometimes known as British Central Africa. N.B.—The British Central Africa Protectorate (also called Nyassaland) is to be distinguished from British Central Africa.

(i) The **Imports and Exports** of the British Empire amounted in 1912 to the enormous sum of £1,352,691,666.

(ii) The **Population** of the Empire amounts to 434,000,000.

(iii) The **Army** of the Empire is inexhaustible in numbers.

(iv) The **Navy** has more than 200,000 men (seamen and marines) and 582 fighting ships, with 94 more building or projected.

(v) "Thus a small European people, numbering hardly 5,000,000 souls at the time it entered on its career of conquest in the 17th century, has gradually extended its dominions, until they embrace the fourth part of the habitable globe and close upon 434,000,000 of human beings. In addition to this, there are wide territories in India, in Arabia, in Africa and elsewhere, which do not officially form part of the British Empire, but where British influence is nevertheless paramount, and the request of an English consul is tantamount to a command."—RECLUS.

(vi) "There is hardly a country in the world which is not indebted to British enterprise and British capital for railways, telegraphs, and water-works, or for some development of its internal resources. Nearly all the submarine telegraph cables belong to England; the mines of Brazil, the railways of the Argentine Republic, and many of the sugar-mills of Egypt are the property of British capitalists. The material labour of *half the world* is carried on through the banks of Lombard Street."

(vii) "Taking British India—itself as large as France, Spain, Portugal, Switzerland, Italy, Germany, Austria, Greece, Turkey, Bulgaria, Servia and Scandinavia all put together—as a unit of measurement, we shall find that British India is somewhat smaller than Western Australia, which is only one of the five huge colonies that make up the vast island-continent of Australia. Again, Australia, if set down upon Her Majesty's dominions in North America, would stand in them as a cup does in its saucer; and when you have put on one side Australia and the Dominion of Canada, we have still some forty colonies

ranging from mere specks to vast countries like New Zealand, or still vaster ones like South Africa, on which we could strew New Zealands about and still have room to spare."—GRANT-DUFF.

(viii) The British Empire is about one hundred times as large as Great Britain; and the above diagram shows the comparative sizes of the two.

## IMPORTANT AND USEFUL MERIDIANS

Meridian of 75° W.	Meridian of 0°	Meridian of 75° E.	Meridian of 140° E.
		Omsk—	
	London—		Okhotsk—
Ottawa—			Yeddo—
		Kashgar—	
	Bordeaux—		
Philadelphia—			
	Valencia—	Lahore—	
Cape Hatteras—			
	Oran—		
Carthage—			
		Aurungabad—	
	Coomassie—		Adelaide—
Bogota—			
		Calicut—	
Lima— (nearly)			

1. When it is 12 o'clock noon in London, it is 7 a.m. in Ottawa, and 5 p.m. at Calicut.

2. When it is 12 noon in London, it is 12 midnight in the Fiji Islands in 180° (E. or W.).

3. When it is 12 noon in Philadelphia, it is 12 midnight in India ; and contrariwise.

# DISTANCES FROM LONDON EAST AND WEST (AS THE CROW FLIES) IN PORTIONS OF 1000 MILES

(By means of these, the distances of other places may be roughly calculated.)

1.	{ South of Italy, . . . . }	. . . .	1000 miles
	{ Iceland, . . . . }	. . . .	
2.	{ East Coast of Black Sea, . . . }	. . . .	2000 „
	{ Greenland, . . . . }	. . . .	
3.	{ East of Persia, . . . . }	. . . .	3000 „
	{ Quebec, . . . . }	. . . .	
4.	{ Mouth of the Indus, . . . }	. . . .	4000 „
	{ Chicago, United States, . . }	. . . .	
5.	{ Calcutta, . . . . }	. . . .	5000 „
	{ Austin, Texas, United States, . }	. . . .	
6.	{ Cape Town and Canton, . . . }	. . . .	6000 „
	{ Quito and San Francisco, . . }	. . . .	
7.	{ Borneo, . . . . }	. . . .	7000 „
	{ Buenos Ayres, . . . . }	. . . .	
8.	{ West Coast of Papua, . . . }	. . . .	8000 „
	{ Patagonia, . . . . }	. . . .	
9.	{ Perth, in West Australia, . . }	. . . .	9000 „
	{ Marquesas Islands, . . . }	. . . .	
10.	{ Adelaide, in South Australia, . }	. . . .	10,000 „
	{ Friendly Islands, . . . . }	. . . .	
11.	{ Tasmania, . . . . }	. . . .	11,000 „
	{ Norfolk Island, . . . . }	. . . .	
12.	New Zealand, . . . . .	. . . . .	12,000 „



THE BRITISH ISLES

## THE BRITISH ISLES

1. **The British Isles.**—The British Isles consist of two large and a great number of small islands which stand up from a submerged bank or submarine plateau, in the north-west of the continent of Europe. The two largest are **Great Britain and Ireland**. These two islands, but three kingdoms, form politically **The United Kingdom**.

(i) **Great Britain** is the largest island in Europe. It is 600 miles long, and has an area of nearly 90,000 square miles. It contains three countries—England, Wales, and Scotland.

(ii) The area of **Ireland** is 32,500 square miles—little more than one-third of the area of Great Britain. The two islands are separated by the Irish Sea, whose waters are much deeper than those of the German Ocean.

(iii) The **crowns** of England and Scotland were united in 1603; the **parliaments** in 1707. The parliaments of Ireland and Great Britain were united in 1801.

2. **The Submarine Plateau.**—The Submarine Plateau, of which the British Isles are prominent or outstanding parts, is a vast continuation of the European continent, and stretches from the corner of the Bay of Biscay to the north of the Shetland Isles. It drops, in a long steep cliff, to the deeper depths of the Atlantic Ocean, a little to the west of Ireland. Were the bed of the German Ocean raised only 200 ft., we could walk dry-shod from England to France. Thousands of years ago, the British Isles formed a part of the continent.

(i) The submarine telegraph wire, which connects Valentia in Ireland with America, was once broken by sawing against the edge of this submarine cliff.

(ii) Were St. Paul's Cathedral, which is 370 feet high, put down in the middle of the German Ocean, the dome would stand clear out of the water.

(iii) The following are some of the proofs that Great Britain was once united to the continent: (a) The granite of Cornwall is the same as that of Brittany. (b) The chalk hills and cliffs of Kent are a prolongation of the chalk hills of northern France. (c) The Great Plain of England is a continuation of the Great Plain of Europe. (d) The rocks of Shetland and the north of Scotland are the same as those of Scandinavia. (e) Ireland and Britain were also at some former time one; for the hills in the north-east of Ireland are a continuation of those in the south-west of Scotland.

(iv) "To the seas which surround them the British Islands are indebted for the mildness of their climate, their security from foreign invasion, their commerce, and the wealth yielded by productive fisheries."

**3. Geographical Position.**—The British Isles occupy the best geographical position in the world. If we place one leg of a pair of compasses on Falmouth, and carry the other round half of the globe, we shall find that that half embraces almost all the land on the surface of the planet.—They have also a direct connection with all the oceans of the world: with the Atlantic; with the Indian by the Suez Canal; and (before long) with the Pacific by the Panamá Canal. Great Britain also lies directly opposite the most industrial, the most wealthy, and the most densely peopled plains of Europe.—And lastly, our isolation in and by the sea has enabled us to work out our own destiny, with little or no interference from the powers and peoples of Europe.

(i) If Great Britain had lain in the heart of a vast continent, like Thibet, its development would have been very different.

(ii) The currents of the North Atlantic lead to Great Britain; and the prevalent south-west winds, which blow two days out of three on an average, carry ships easily to it from the two Americas.\*

**4. Commercial Position.**—From the point of view of commerce, too, the position of these islands is no less happy. They lie off the middle of the European continent, and can trade as easily with Spain as with Scandinavia. They can, moreover, trade as easily with the East and the West, as with the North and the South. Their long and deeply indented coasts give opportunities for splendid ports—the eastern ports, such as London and Hull, trading with Europe and the East, the western, such as Liverpool and Glasgow, trading with the New World of the West. Again, the broadest and wealthiest part of England lies nearest to the Continent and to its greatest markets.—Lastly, our position on an island has forced a large part of our population to become sailors, to become the carriers of the world,—to found new colonies for an overflowing population, and thus to create new markets in other parts of the globe.

## ENGLAND AND WALES

1. **England and Wales.**—England (with Wales) forms by far the larger part of the island of Great Britain. It is about two-thirds the size of the whole island.

2. **Boundaries.**—The following are the boundaries of England :—

1. **N.**—Scotland.
2. **E.**—The German Ocean.
3. **S.**—The English Channel.
4. **W.**—The Irish Sea, Wales, and the Atlantic.

(i) Wales has the sea on three of its sides : the Irish Sea on the North ; St. George's Channel on the west ; Bristol Channel on the south ; and England on the east.

(ii) The boundary line between England and Scotland runs from the Tweed to the Solway Firth, through the Cheviot Hills.

3. **Size.**—The area of England amounts to **50,867** square miles ; that of Wales to **7442**. The total area of both is, therefore, **58,309** square miles. The greatest length is **430** miles ; and the greatest breadth, **370** miles.

(i) The greatest length is measured from the Lizard to Berwick.

(ii) The greatest breadth is measured from the Land's End to Lowestoft Ness.

4. **Shape.**—In shape, England is an irregular triangle, with its apex at Berwick-on-Tweed, and its base between the Land's End and Dover. Its coast line is very highly developed ; and there are numerous openings for excellent harbours. So deeply hollowed out is the coast line by bays and inlets, so cut in and indented by long arms of the sea and estuaries, that no point in the interior is more than fifty miles from sea-water. The total length of the coast line is 1800 miles.

The only countries in the world with a longer coast line, compared with their size, are Greece, Norway, Ireland, and Scotland.

5. **The Western Coast.**—The West Coast of England is high, mountainous, and rocky, with bold cliffs and projecting buttresses of

old hard rock, standing out into the sea. It contains four deep and wide bays, separated by rocky headlands.

(i) These inlets are : the **Solway Firth** ; **Morecambe Bay** ; the **Mouths of the Ribble, Mersey, and Dee** ; **Cardigan Bay** ; **Milford Haven** ; and the **Bristol Channel** (within which are also **Carmarthen Bay**, **Swansea Bay**, and **Barnstaple Bay**).

(ii) The chief rocky and lofty headlands are : **St. Bees Head** ; **Point of Aire** ; **Great Orme's Head** ; **Braich-y-pwll** ; **St. David's Head** ; **Worms Head** ; **Hartland Point** ; and **Land's End**.

(i) The **Solway Firth** is noted for its salmon fisheries.—**Milford Haven** is one of the grandest natural harbours in the world.—In the **Bristol Channel** the tide rushes up the estuary of the **Severn** as a "bore." At **Chepstow** it rises 45 ft. This is higher than in any other part of Europe.

(ii) **St. Bees Head** is a continuation of the **Cumberland Mountains**. **Great Orme's Head** (673 ft.) is the loftiest point on the coast of **England and Wales**. **Land's End** is an abrupt mass of granite rock.

**6. The Eastern Coast.**—The **East Coast** has a regular line, broken only by the estuaries of rivers ; and its shores, which consist chiefly of gravel, clay, and sand, are low and monotonous. It has four river openings, which increase in size as we go south.

(i) These openings or inlets are : The mouth of the **Tees** ; the **Humber** ; the **Wash** ; and the mouth of the **Thames**.

(ii) The chief headlands are : **Flamborough Head** ; **Spurn Point** ; **Hunstanton Point** ; **Lowestoft Ness** ; the **Naze** ; and the **North Foreland**.

(i) The **Humber** is the estuary of the **Yorkshire Ouse** and the **Trent** ; and is navigable for the largest vessels up to **Hull**.—The **Wash** is too shallow for navigation ; it is useless for shipping. —The **Mouth of the Thames** is the most important harbour in **England**.

(ii) **Flamborough Head** (the "Head of the Flame Hill"—so called from the beacon-fires lighted on it) is the end of a series of white chalk cliffs.—**Hunstanton Point** is the end of the **East Anglian Heights**.—**Ness** and **Naze** are different forms of the word *nose*. We find the same word in *Dungeness*, *Caithness*, and the *Naze* in **Norway**. **Lowestoft Ness** is the most easterly point in **England**.

**7. The Southern Coast.**—The **South Coast** of **England** combines the peculiarities of the **Eastern** and the **Western Coasts**. That half which lies to the east of the **Isle of Wight** is a low clay shore, broken here and there by chalk cliffs ; the half to the west is high and bold, composed of old and hard rocks. The two harbours behind the **Isle of Wight** are among the best in **England**.

(i) The chief inlets (which are small) are : **Portsmouth Harbour** and **Southampton Water** ; **Weymouth Bay** ; **Torbay** ; **Plymouth Sound** ; **Falmouth Harbour** ; and **Mount's Bay**.

(ii) The chief headlands are : the **South Foreland** ; **Dungeness** ; **Beachy Head** ; **Selsea Bill** ; **St. Albans Head** ; **Portland Bill** ; **Start Point** ; and the **Lizard**.

(i) **Portsmouth Harbour** is completely landlocked, and forms a magnificent port.—**Plymouth Sound** is protected by an artificial breakwater a mile long, and is one of the great naval stations of **Britain**.—**Mount's Bay** receives its name from **St. Michael's Mount**—a conical rock about 400 yards from the shore.

- (ii) **Dungeness** (= "Danger Ness") is a low clay spit.—**Beachy Head** is a chalk cliff.—**Start** means *tail*; and we have the same word in *restart*. It is the "tail of England."—**Lizard Point** (the most southerly in England) and **Land's End** (the most westerly) are two abrupt masses of volcanic rock.

**8. Islands and Straits.**—The larger islands of England lie off the west and south coasts. These are: the **Isle of Man**; **Anglesea**; and the **Scilly Isles**, in the west; the **Isle of Wight**, in the south. Off the coast of Northumberland lie **Holy Island** and the **Farne Islands**.—The most important straits are the **Straits of Dover** in the east; the **Spithead** and **Solent**—east and west of the Isle of Wight—in the south; and the **Menai Straits**—between Anglesea and the mainland—in the west.

(i) The smaller islands are: (a) *East*: **Coquet**; **Sheppey** (in the estuary of the Thames); and **Thanet**—the two last now joined with the mainland. (b) *West*: **Walney** (off the coast of Lancashire); **Holyhead** (next Anglesea; but only an island at high tide); and **Lundy Island** (at the mouth of the Bristol Channel).

(ii) On the east coast, too, we have **Yarmouth Roads** and the **Downs**, where sailing-ships lie waiting for a fair wind.

- (i) The Isle of Man stands midway between the three countries. It is ruled by the "House of Keys." It has valuable lead mines. The highest point is *Snaefell* (2024 ft.). The word *Anglesea* means "Strait Island." *Ea* or *ey* is a Norse word meaning *island*, as in *Chelsea*, *Jersey*, etc.; *Angle* (= *ongul*) means *Strait*.—The Scilly Islands are a group of 145 islets, of which 6 are inhabited. They send early vegetables and flowers to London.—The Isle of Wight is called the "Garden of England." It is one of the loveliest places in the world.
- (ii) **Roads** are places in the sea where ships can *ride* in safety.—The Downs lie between the Goodwin Sands and the coast of Kent, and are the largest natural "harbour of refuge" in the world. Hundreds of vessels may be seen there at one time.
- (iii) The "Channel Islands," Jersey, Guernsey, Alderney, and Sark (Jersey is the largest) belong geographically to France; but have been in our hands since 1066. The three first are celebrated for a very fine and beautiful breed of cows.

**9. The Build of England.**—The build of England and Wales is somewhat difficult to understand at first. The elevated regions lie mostly in the west; the low plains in the east. A line of mountains, called the **Pennine Range** (which is the backbone of England), starts from the Cheviot Hills, and runs due south as far as Derbyshire. From this county, England is almost entirely a plain, traversed by ranges of low hills, those in the south—the **North Downs** and the **South Downs**—being at right angles to the main axis of elevation. In the extreme west we find three sets of highlands rising up: the **Cumbrian Group** of Mountains; the **Welsh** (or **Cambrian**) Mountains; and the **Devonian-Cornish Highlands**. East and south of the Pennine Range is the **Great Plain** of England,—a broad expanse which is in reality a continuation of the Great European Plain. West of the

Pennine Range—between it and the Welsh Mountains—there is also a narrow plain, which stretches between the Irish Sea and the Bristol Channel. England-and-Wales is thus made up of (a) a long range; (b) a group of mountains; (c) the mountain-land of Wales; (d) a highland in the far south; (e) a long and broad plain on the east, and (f) a narrow plain on the west.

(i) The **Watershed of England** runs south, along the Pennine Range; goes still farther south in a very irregular line, when—a little south of the Cotswold Hills—it deflects on the right to the North Foreland, and, on the left, to the Land's End. Thus it has the remarkable shape of a T turned upside down: thus  $\perp$ .

(ii) The **Eastern Slope** of England is the broader and more gradual; hence its rivers are better fitted for navigation; and the plains in it are more fertile. The **Western Slope** is shorter and more rapid; and its climate is also much more rainy.

(iii) The plains of England, except in a few cases, are not flat, but have a gently rolling surface.

**10. Mountain-Systems.**—The mountains of England lie in four distinct groups: the **Pennine Range**; the **Cumbrian Mountains**; the **Welsh (or Cambrian) Mountains**; and the **Highlands of Devon and Cornwall**.

The **CHEVIOT HILLS** are also partly in England. Cheviot Top (2676 ft.) is in Northumberland.

(i) The **Pennine Range** is really a large table-land (about 200 miles long), composed of moors and masses of hills of an average height of from 1000 to 2000 ft. **Cross Fell** (2892 ft.)—"fell" is derived from the Norse word "fjeld," which means "hillside"—is its culminating point. South of the **Peak**, in Derbyshire, the range dies down into the Central Plain of England. It forms nearly the boundary line between the six northern counties; and the traffic between England and Scotland runs to the west and to the east of this range. The Midland Railway crosses the head of it between Carlisle and Settle.

Other high peaks in it are Mickie Fell, Whernside, Ingleborough (=Flame Height), and Pen-y-gent (or Pennigant).

(ii) The **Cumbrian Group** lies west of the Pennine Chain, with which it is connected by a spur of high moorlands running out from Whernside. The mountains stand in three counties, Cumberland, Westmoreland, and Lancashire—in the lovely and picturesque district of "The Lakes," and near the coast of the Irish Sea. The highest peak is **Scafell** (3208 ft.), which is the loftiest mountain in England.

Other high peaks are Helvellyn, Skiddaw Fairfield (=Far fell, or "Hill of sheep"), Saddle Back, Conlston Old Man (=Alt Moen=High Rock), etc.

(iii) The **Welsh Mountains (or Cambrian System)** lie between the valleys of the Dee and Severn and the Irish Sea. They contain many mountain-ranges, of which the **Snowdon Range** and the **Plinlimmon Range** are the best known. The whole district is remarkable for "the great beauty of its glens and mountain-gorges, and the abundance of its tarns and running waters." The highest peak is **Snowdon** (3570 ft.), which is the highest mountain in South Britain.

Other high peaks are Cader Idris (=Chair of Arthur or "Arthur's Seat"), Plinlimmon, and Brecknock Beacon.



(iv) The **Highlands of Devon and Cornwall** lie in the great south-western peninsula of England. They are separated from the low uplands of Southern England by the Valley of the Parret and the Vale of Taunton. **Yes Tor** (2077 ft.) on Dartmoor, is the highest point in Devonshire; **Brown Willy** (1368 ft.) is the highest peak in Cornwall.

Other high points are Cawsand Beacon on Dartmoor: and Dunkerry Beacon on Exmoor (but in Somerset).

(v) There are in England many other ranges of hills which it is useful for us to know something about. Almost all are below a thousand feet above the sea-level. They are of two kinds: **Oolitic or Limestone Ranges** and **Chalk Ranges**. The chief Oolitic Range which runs from near Bristol to the Humber (and reappears in Yorkshire), forms the eastern boundary of the manufacturing districts. To the west and north-west of it lie all the manufacturing centres of England; to the east and south-east, districts that are (with the single exception of London) entirely agricultural and pastoral. They may be best set forth in a tabular form:—

OOLITIC RANGES.	POSITION.
Cotswolds, . . . . .	Gloucestershire—They part the Severn and the Thames Valley.
Edge Hills, . . . . .	Warwickshire, on the borders of Oxfordshire.
Mendip Hills, . . . . .	North-west of Somersetshire.
Yorkshire Moors, . . . . .	North of Yorkshire, west of Whitby.
CHALK RANGES.	POSITION.
Lincolnshire Wolds, . . . . .	In the east of Lincolnshire.
Yorkshire Wolds, . . . . .	East Riding.
Dorset Heights, . . . . .	Dorsetshire.
Salisbury Plain, . . . . .	Wiltshire.
Marlborough Downs, . . . . .	Wiltshire.
Chiltern Hills, . . . . .	Oxfordshire.
East Anglian Heights, . . . . .	From the Chiltern Hills to the Wash.
Gog Magog Hills, . . . . .	Cambridgeshire.
Hampshire Downs, . . . . .	Hampshire.
Inkpen Beacon, . . . . .	Wiltshire.
North Downs, . . . . .	Hampshire, Surrey, and Kent.
South Downs, . . . . .	Hampshire and Sussex.

- (i) The word *oolitic*, means *egg-stoned*, from the Greek *oon*, an egg, and *lithos*, a stone. The limestone of which these ranges are composed is made up of multitudes of little round egg-like particles. (ii) The Cotswolds have their steep escarpment towards the Severn. (iii) The Yorkshire Moors are the wildest part of Eastern England. (iv) The North and South Downs branch off, forkwise, from the Hampshire downs. (v) The Mendip Hills, in Somerset, are famous for their lead mines. (vi) Other well-known hills are the Clee Hills, in Shropshire; the Wrekin, a solitary cone, also in Shropshire; the Malvern Hills, in Worcester and Herefordshire; Clent Hills, in Worcestershire; and the Quantock Hills, in Somerset.

11. **Plateaus.**—England does not possess table-lands like those of

France or Southern Germany, still less like those of Spain or Ireland. But parts of the **Pennine Range**, **Dartmoor** and **Exmoor** in Devonshire are all real table-lands.

(i) Where Mickel Fell, Wharfedale, and Ingleborough rise up, the **Pennine Range** is a table-land 40 miles wide.

(ii) **Dartmoor** is a table-land of moor between 1000 and 2000 ft. high. **Exmoor** is a treeless table-land cleft by wooded ravines. Its elevation is about 1000 ft.

**12. Plains.**—England may be fairly described as, on the whole, a country of low plains, two-thirds of its area being lowland. The three largest plains are : the **Eastern Plain** ; the **Central Plain** ; and the **Western Plain**.

(i) The **Eastern Plain** is again sub-divided into the **Plain of York** ; the **Fen District** ; and the **Plain of the three Eastern Counties**. The Plain of York is the lower valley of the Yorkshire Ouse, and is extremely level. The Fen District is the most low-lying region in England. It was once a district of marsh, bog, and fen ; but most of it has been drained, and is now good corn-land. The Eastern Counties are rolling country, which becomes more and more level as we go to the south, where it ends in the wide clay flats of Essex.

(ii) The **Central or Midland Plain** is a low plateau, which includes most of Leicester, Derby, Stafford, and Warwickshire.

(iii) The **Western Plain** extends from the base of the Westmoreland Hills on to the basin of the Severn, from which it is separated only by a low watershed.

(iv) The other smaller plains are : the **Plain of Carlisle**, round the head of the Solway Firth ; the **Plain of the Severn** ; the **Hampshire Plain**, between the chalk hills of Dorset, Hampshire, and Sussex, and the sea ; the **Weald of Sussex**, between the North and the South Downs, the surface of which, however, is highly diversified.

**13. Rivers.**—The higher mountains of England rise in the west of the country ; and, though the watershed of a country does not always coincide with the line of highest elevation, yet the watershed of England is much nearer to the west than to the east coast. Hence the long and gentle slope of the country is that towards the North Sea ; the short and abrupt slope goes down to the Irish Sea. There is also a short slope to the south. These three slopes naturally divide the rivers of England into three classes : the **Eastern**, the **Western**, and the **Southern Rivers**. The largest rivers are the Eastern—those which belong to the North Sea drainage.

(i) The watershed between the basins of the Mersey and the Trent is 25 miles from the tidal waters of the Mersey, and five times that distance from the tidal waters of the Humber.

(ii) there is much more rain on the western slopes of England, the western rivers contribute much more water to the sea than the Eastern.

**14. The Eastern Rivers.**—The chief rivers of the Eastern slope are the **Tyne**, the **Wear**, the **Humber**, and the **Thames**. They are all that great commercial rivers ought to be—slow in current; with broad mouths; with high tides; and without bars.

(i) The **Tyne** (73 miles), though so short, is a great commercial and industrial river. It rises in two streams—the **North Tyne** from the Cheviots, the **South Tyne** from Crossfell. They unite a little above Hexham; and then the united stream flows eastwards between Newcastle and Gateshead, and across the great coal-field of Northumberland. It falls into the sea between Tynemouth and South Shields.

(ii) The **Wear** (65 miles) is a great shipping river. The busy port of Sunderland stands at its mouth.

(iii) The **Humber** is the great sea-river or estuary into which the Yorkshire Ouse from the north, and the Trent from the south, empty their waters. The **Ouse** (150 miles) is made up of five tributaries from the west, one from the south, and one from the east. The five from the west, spread out “like the five fingers of a hand,” are the Swale, the Ure, the Nidd, the Wharfe, and the Aire (with the Calder), which rise in lonely valleys along the Pennine Chain. The Derwent, the eastern tributary, comes from the Yorkshire Moors. The Ouse flows through the Vale of York, which is about 50 miles wide, and is the largest vale in England. There is also no river in England which has so many large and wealthy towns in its basin as the Yorkshire Ouse.—The **Trent** (180 miles) rises in the southern end of the Pennine Chain. It flows across the Staffordshire coal-field, through the Central Plain, and then through the Eastern Plain into the Humber.

Its chief tributaries are the Derwent, Soar, Tame, Dove, and Sow. The Trent itself is navigable for barges up to the brewing town of Burton-on-Trent. The Trent basin is a very industrial district; it contains pottery-works, ironworks, coal-mines, breweries, and many kinds of factories.—The basin of the Humber is the largest in England. It contains 9550 square miles—that is, about one-sixth of the whole country.



RIVER HUMBER.

(iv) The **Thames** (215 miles), though much the most important, is only the second longest river in England. It is the water-way across southern, as the Trent is the water-way across central, England. It rises in the Cotswold Hills, about three miles from Cheltenham, and only nine miles from the tidal waters of the Severn. The two rivers are connected by a canal. Its chief tributaries are: on the right, the Kennet, Wey, Mole, Darent, and Medway; on the left, the Cherwell, Thame, Colne, Brent,

Lea, and Roding. It is navigable for the largest ships that float to near London Bridge, and for small boats to Lechlade, about 160 miles from the sea. On its banks stand many lovely cities and towns—Oxford, Windsor, Richmond, etc.

The smaller rivers of the Eastern Slope are : the TEES, which forms the boundary between Durham and Yorkshire.—The WITHAM, WELLAND, NEN, and GREAT OUSE, which all enter the WASH by slow and winding courses.—The YARE (which enters the sea at Yarmouth), the ORWELL, the STOUR of Essex, the COLNE (on which Colchester stands), and the CHELMER, all rise in the East Anglian Heights and fall into the North Sea.—The STOUR of Kent rises in the Wealden Heights and falls into the Straits of Dover.

15. **The Western Rivers.**—The three most important rivers of the western slope are the **Mersey**, the **Bristol Avon**, and the **Severn**.

(i) The **Mersey** (68 miles) is a very short and insignificant stream ; but its broad and deep estuary (the “Liverpool Channel”) is one of the greatest harbours in the world. Its two main tributaries are the Irwell (on which Manchester stands), and the Weaver, which flows through the “salt-cellar” of Cheshire.—“The Mersey is the geographical centre of Great Britain and Ireland.”

(ii) The **Bristol Avon** (78 miles), which is also called the Lower Avon, is only navigable when the tide is full.

(iii) The **Severn** (240 miles) rises on the slope of the Plinlimmon Range, and falls into the Bristol Channel. The tide rises higher in the Severn than in any other harbour in Europe. It is navigable as far as Welshpool (in Montgomery) ; and steamers go up to Gloucester.<sup>1</sup> Its chief tributaries are the Teme and the Upper (or Stratford) Avon. The “bore” of the Severn—the rushing up of the foam-crested spring-tide wave—is well known.

The smaller rivers of the Western Slope are : the EDEN, which flows from Crossfell, through a most lovely and well-wooded valley, into the Solway below Carlisle ; the LUNE, which flows into the south of Morecambe Bay, after passing Lancaster (=Lunecaster) ; the RIBBLE, on which “Proud Preston” stands ; the DEE (on which Chester stands), which flows through Bala Lake, and enters the Irish Sea by a Channel now largely silted up ; and the lovely winding WYE, which rises near the Severn on Plinlimmon, and enters its estuary. The USE, TAFF, TOWY, and TEIFY, are famous Welsh rivers.

16. **The Southern Rivers.**—The rivers which fall down the southern slope of England are short, shallow, and of little value to commerce. The most important is the **Tamar** : and next to it come the **Exe** and the **Avon** of Salisbury.

(i) The **Tamar** (45 miles) rises in the northern slopes of Dartmoor, forms the boundary between Devon and Cornwall, and falls into Plymouth Sound.

(ii) The **Exe** (55 miles) rises in Exmoor, flows right across the peninsula, past Exeter (=Execaster), and enters the English Channel at Exmouth.

(iii) The **Avon** of Salisbury flows across Salisbury Plain, and enters the sea at Christchurch.

The still smaller rivers of the Southern Slope are : the FAL (on which Falmouth stands) ; the DART (with Dartmouth) ; the TEIGN (with Teignmouth) ; the STOUR of Dorset ; the ICHIN (which flows into Southampton Water) ; the ARUN (on which Arundel stands) ; the SUSSEX OUSE ; and the ROTHER, which forms the boundary between Sussex and Kent.

<sup>1</sup> Via the BERKELEY SHIP CANAL.

**17. Lakes.**—The Lakes of England lie almost wholly in the “Lake District”—a mountainous region in the north-west of the country. All of them, seven in number, lie round the central mountain-mass of Helvellyn, from which they radiate like the spokes of a wheel. They are : **Windermere** ; **Ulleswater** ; **Thirlmere** ; **Derwentwater** ; **Buttermere** ; **Wastwater** ; and **Coniston Water**.

(i) **Windermere** (14 miles long), which points to the south, is the longest, largest, and most beautiful. It is called the “Queen of the Lakes.” It lies between Lancashire and Westmoreland. Its greatest depth is 40 fathoms. The northern end is surrounded by some of the grandest and most picturesque peaks and masses of the Lake District. It sends the river Leven into Morecambe Bay.

(ii) **Ulleswater**, between Westmoreland and Cumberland, is the second largest of the lakes. At its head towers Helvellyn.

(iii) **Derwentwater** is also a lovely lake, and lies at the foot of Skiddaw.

(iv) **Thirlmere**, a beautiful and very clear lake, supplies Manchester with drinking water — **Coniston Water** lies at the foot of Coniston Old Man. **Wastwater** lies highest up among the mountains, and is also the deepest of all the lakes.

(v) **Grasmere** and **Rydal Water** are lovely lakes, imperishably connected with our English Literature. The names of Wordsworth, Coleridge, Southey, De Quincey, Hartley Coleridge, and others, are linked with these scenes.

(vi) **Lake Bala** is a beautiful lake in North Wales. It is the largest in the country ; and the Dee flows out of it.

**18. Minerals.**—The most important minerals found in England are **coal** and **iron** ; and these are the chief sources of the wealth of the country. **Copper**, **lead**, **zinc**, and **tin** ; **salt**, **marble**, **building-stone**, and **slate** are also found in considerable quantities. A line from Exmouth to the Wash marks the southern boundary of the Mineral Districts.

(i) The chief coal-fields of England are : (1) the **Northumberland** and **Durham** Coal-field, which lies between Warkworth and Darlington ; (2) the **Yorkshire** and **Derbyshire** Coal-field, between Leeds and Derby ; (3) the **Lancashire** Coal-field, between the Ribble and the Mersey ; (4) the **North Stafford-**



THE COAL-FIELDS OF ENGLAND.



shire Coal-field, in the Potteries District; (5) the **South Staffordshire** Coal-field, in the Wolverhampton Iron District; (6) the **Bristol** Coal-field; (7) the **South Wales** Coal-field, between Pontypool (in Monmouth) and St. Bride's Bay; (8) and the **Cumberland** Coal-field in the north-west of England. Of all these coal-fields, Durham is the richest, and raises about 39 million tons of coal per annum.

(ii) England is the greatest mining country in the world. Her "Black Indies" have been a greater source of wealth to her than the possession of Mexico or of California. Her coal-fields have an area of over 12,000 square miles—twice the size of Yorkshire.

(iii) **Iron** is found in many of the coal-fields, especially in those of Staffordshire and Yorkshire, and to a smaller extent in Wales. The **Cleveland** District, south of the Tees, produces excellent iron. Brown iron-ore is found in **Lincolnshire** and **Northamptonshire**; and red iron-ore in the **Furness** District, in the north-west of Lancashire, near the Lakes.

(iv) **Lead** is mined in Cumberland, Westmoreland, Durham, Derbyshire, Shropshire, Wales, and the Isle of Man; **Zinc** chiefly in Cumberland, Wales, and Man.

(v) **Copper** is found chiefly in Cornwall and Devon; **Tin**, entirely in these two counties. The copper from Spain and South America has so lowered the price, that most of the Cornish mines have been abandoned.

(vi) **Salt** is found chiefly in Cheshire in the valley of the Weaver—"the salt-cellar of England." It is obtained both by mining and by pumping up the brine. There are also thick beds of rock-salt in Worcestershire and Durham.

(vii) **Building-stone** is found chiefly in the northern counties of England. But the Isle of Portland, in Dorset, produces the best freestone for building.

(viii) **Slate** is extensively quarried in Wales (where the grey-green kind, which commands the highest price, is produced), and in Cumberland and Westmoreland.

**19. Climate.**—England stands in the northern part of the Temperate Zone; it has therefore a **cool-temperate** climate. It stands in the sea; and has therefore an **insular** climate—that is, one which is both mild and moist. The west coast is, on the whole, warmer and moister than the east coast. The temperature decreases with the latitude in summer; but, in winter, many districts in the north are quite as warm as London. It is the presence of the Sea that gives us our warmer climate, and also most of our supplies of rain.

(i) **Cloudiness** is a strong characteristic of the English climate. It may rain any day; it sometimes rains every day.

(ii) If latitude were the sole, or even the chief, determining cause of climate, we should have the cold of Labrador, which lies between 50° and 60°; and London would have the winter of Nain in Labrador.

(iii) The *mean* temperature of London is the same as that of Kieff (in the south of Russia); but Kieff has a very much colder winter and a much hotter summer, and thus the two extremes come to the same average as the two means.



(iv) The isotherm of January (40° Fahrenheit), goes *round* the whole island; and it is as warm—sometimes warmer—on the Moray Firth as it is in Kent or Surrey.

(v) The rainiest county is **Cumberland**; the driest, **Cambridge**. At Seathwaite, in the Cumbrian Group, as much as 180 inches or 15 ft. of rain has been known to fall in a year; at Cambridge, the average is 20 in.

(vi) The fig and the grape ripen in the open air in the south [of England; the myrtle and arbutus can stand the winter of Devonshire and the Isle of Wight.

(vii) The Atlantic coasts are kept comparatively cool in summer, and warm in winter, by the south-west breezes which blow, two days out of every three, from the Gulf Stream. The south-east of England, being close to the Continent, partakes more of continental extremes; it is two or three degrees warmer in summer, and colder in winter, than the west.

(viii) "The westerly winds, which preponderate throughout the year, and more especially in summer and autumn, carry with them the warmth and the moisture of the Atlantic."

**20. Vegetation.**—England belongs to the belt of deciduous trees; Scotland to the belt of pine-woods. The only two native trees that still exist in England are the yew and the Scotch fir; all the others have been introduced by man. The **oak**, **beech**, and **elm** are common in most parts of England; the ash, birch, chestnut, hazel, aspen, poplar, willow, and maple, are also well-known trees. The hawthorn hedge thrives in our moderate climate, and is a familiar characteristic of our landscape. On the whole, the vegetation is that of the same latitude on the Continent; only England lies beyond the limit of the vine.

(i) The English Oak is the typical tree. It is a striking feature in the landscape; it used to be the naval defence of our shores: and it is said to represent the English character.

(ii) The forests still existing in England are: the **New Forest** in Hampshire; the **Dean Forest** in Gloucestershire; **Windsor Forest** in Berks; and **Sherwood Forest** in Notts.

(iii) The limit of the vine on the Continent is 52°—half a degree north of London. But the climate of England has been gradually cooling down during the last few hundred years. At Hatfield (Lord Salisbury's house), near London, the gardens used (in the 17th century) to grow 1400 standard vines in the open air; there is now not one. Many towns in the south have the word "Vineyard" as the name of a suburb; but no vines grow there now (except on a southern wall or under glass).

**21. Animals.**—The destruction of the forests and the spread of tillage have led to the disappearance of most of our wild animals. The bear, wolf, boar, and beaver of Old England are no longer to be seen. The wild animals are not large: the best known are the

badger, the otter, the rabbit, the squirrel, the hedgehog, and the weasel. The deer, the hare, and the fox would probably be rooted out quickly, if they were not preserved. The seal visits our northern shores. The domestic animals are among the best and strongest of their kind.

- (i) The brown bear had disappeared from England before the Norman Conquest.
- (ii) The last wolf is said to have been killed in 1710.
- (iii) The beaver is said to have become extinct about the time of Richard I. (1157-99) It is now rare even in Central Europe.
- (iv) The beaver is commemorated in the name of Beverley.

**22. Inhabitants.**—The people of England—Angles, Engles, or English—belong to the **Teutonic** stock of the Aryan or Indo-European family; the people of Wales and Cornwall to the **Celtic**. In the east there is much Scandinavian blood; in the west, a good deal of Celtic. With the Conquest, a strong strain of Norman-French was introduced into the country. In spite of all these mixtures, the Englishman is and remains a **Northern Teuton**.

The *ar* in *Aryan* is the same as the *ar* in *arable*. Hence "Aryan" means originally "the tilling race."

(i) The **English** belong to the Low-German branch of the Teutonic race. *Low Germany* is that part which lies north of the southern table-lands; and along the lower courses of the rivers.

(ii) The **Welsh** belong to the Cymric branch of the Celtic race. The Celts were gradually and surely edged off to the west—to Wales, Cornwall, etc.—by the steady pressure of the Angles, Saxons, and Jutes.

(iii) "The Danish element is strongly represented in the fifteen counties, from Hertford to Durham, which was formerly known as the district of the *Danelagh*."

**23. Population and Populousness.**—The population of England and Wales amounted (in 1911) to over 36,000,000; of which about 2 millions belong to Wales. This gives an average of nearly 620 persons to each square mile; and England is thus the most densely populated country in Europe, with the exception of Saxony and Belgium. The prevailing tendency at present is to the rapid increase of the urban population.

(i) In 1801, the population was under 9,000,000; in 1851, it had doubled itself; and in 1911, it doubled itself again.

(ii) More than three-fourths of the people live in towns. London alone contains more than one-fifth of the whole population.<sup>1</sup>

(iii) The two most thickly peopled towns are Liverpool and Manchester.

<sup>1</sup> London (Metropolitan and City Police Districts) contains 7,252,963 people. Registration London has 4,522,961 people.

24. **Industries.**—England is a commercial and manufacturing nation; agriculture has been for the last hundred years gradually receding into the background. The change from an agricultural condition to one of trade and manufactures is due to the discovery of the vast supplies of coal, and to the application of coal to the cheap production of steam-power. This has made England the workshop and market of the world, and her ships the ocean-carriers for herself and many other nations.

25. **Manufactures.**—The two greatest manufactures of England are textiles and hardwares. The three staples are cotton; wool; and iron. Cotton is the most important of all the English manufactures.

(i) The annual value of the textiles produced in the United Kingdom amounts to about £200,000,000; of the hardware to about £130,000,000. This is equivalent to about £7 for each inhabitant: in Russia, manufactures amount to only 16s. per head.

(ii) South Lancashire is the chief seat of the cotton manufacture. Manchester is the cotton capital;

Liverpool, the cotton port. In the square formed by Preston and Burnley, Liverpool and Manchester, stand many towns all more or less engaged in cotton-spin-



THE COTTON AND THE WOOLLEN DISTRICTS  
OF ENGLAND.

ning and cotton-weaving. "The English cotton-mills contain as many spindles and power-looms as those of all the rest of the world combined." The other towns engaged in the cotton manufacture are Preston, Burnley, Blackburn, Bolton, Bury, Ashton, Stockport, Oldham, and many smaller ones.

(iii) The West Riding of Yorkshire is the chief seat of the woollen manufacture. The two principal centres are Leeds and Bradford. The other towns engaged in it are Halifax, Huddersfield, Wakefield, Dewsbury, Barnsley, etc.

(iv) South Staffordshire, with portions of the three counties which touch it on the south, is the chief seat of the iron manufacture. Birmingham is its centre and capital.

Sheffield produces most and the best cutlery; and there are also large manufactures both of iron and steel at Newcastle and at Middlesbrough, in the Cleveland District.

The minor industries of England are almost countless. Some of them are: POTTERY, in North Staffordshire; SILK, in Manchester, Derby, and Coventry; HOSIERY and LACE, in Leicester; LACE, in Nottingham; LINEN, in Leeds; paper, glass, watches, clocks, etc., in many other towns.

26. **Commerce.**—Great Britain holds the first place among the nations for manufactures; and she also holds this position with regard

to commerce. Her exports and imports are much greater than those of any other country; and the annual grand total of both amounted in 1911 to £1,343,000,000. The six chief articles of import are: **grain; raw cotton; wool; meats; metals; and timber.** The six chief articles of export are: **cotton goods; woollens; iron in all forms; machinery; coal; and linen manufactures.**



GREAT BRITAIN.

(i) "The British Isles are rich in deep and spacious harbours." It is also worth noticing that these harbours lie almost opposite each other; and that the land at these points contracts almost to the narrowness of an isthmus."

(ii) "England, besides, enjoys the advantage of higher tides than most other countries, which enables vessels of considerable burden to penetrate almost to the heart of the country."

(iii) "The English have become the ocean-carriers of the entire world."

(iv) "Back to England as to a common fountainhead flows the might, the fulness, and the wealth, of her thousandfold relations with the world."—RITTER.

**27. Great Cities.**—England is the home of great cities and large towns. Her ancient agricultural wealth, her modern mineral wealth, her colossal industries and unresting enterprise, her world-wide commerce,—all have contributed to build great cities and to bring workers together in immense numbers. There are in England 37 towns with a population of over 100,000 inhabitants. Of these, 12 contain more than 250,000; and of these again, 6 contain more than 400,000. By far the largest city in England is the capital; and **LONDON** is not only the largest city in England, it is by far the largest on the face of the globe. The population of London is now 7,252,963.<sup>1</sup>

**28. London** (7252) is the largest, wealthiest, and most populous city in the world. It stands in four counties—Middlesex, Surrey, Kent, and Essex. It is a province of houses—a forest of human beings. It is a great agricultural market, a cluster of large manu-

<sup>1</sup> Within the Metropolitan and City Police Districts.

facturing towns, an enormous railway centre, a great maritime port, the central city of commerce for the entire globe, the banking-city (the money market) of the whole commercial world, the legal capital of England, and a great pleasure-city in addition to all these. All the roads and railways of England converge upon it ; all the waterways of the globe—all the great lines of navigation lead to it ; it stands opposite Europe ; but its trade-dealings are with Asia, Africa, the two Americas, as well as with the continent to which it belongs. It is about fifteen miles long by ten broad. A house rises out of the ground every hour of the day and night ; a village of more than 300 persons is added to its population every day ; by its growth it swallows up new villages and smaller townships as it grows ; and a town as large as Brighton is added every year without the addition being noticed. It is an “ocean of bricks and mortar.” Its houses, if placed end to end, would stretch across all Europe and Asia. It is one of the ugliest cities in the world, and one of the most beautiful. The squalor of its lower regions is indescribable ; the scene from the Kensington Gardens Bridge is one of the finest in Europe. It has some of the noblest, as well as many of the meanest, buildings in the world.—Its inhabitants come from all parts of the globe. It contains more Scotsmen than Edinburgh ; and more Irishmen than Dublin.—Its river, the Thames, is spanned by twenty bridges ; and, of these, LONDON BRIDGE is the most frequented in the world. It is daily crossed by at least half-a-million persons. The number of persons who come into London by railway every day is over a million. It not only contains many wonders ; it is itself the greatest “wonder of the world.”

29. **London** as a market contains every known kind of goods and commodities. It is in direct connection with every part of the United Kingdom by rail, by sea, or by canal. First of all, London is the banking-house of the whole commercial world. Any one who has a scheme of the smallest merit for any town or country on the face of the globe can find money there to enable him to carry it out. Though not a great manufacturing or mining town, all the manufactures and mining companies have their head offices in London. . . . It is also the great grain-market of England ; and it draws its supplies of grain from India, Australia, the two Americas, as well as from different



parts of the continent of Europe. . . . It is also the meat market of England. The cattle of Canada, the United States, and South America, are sent to London in thousands ; while frozen meat arrives in immense quantities from New Zealand, Australia, and Argentina. . . . London is also the chief fish emporium of England. In this character it draws its supplies from all the seas and oceans of the world. The Pacific sends it tinned salmon and oysters ; Canada forwards to it immense quantities of cod ; herrings come to it from every part of the North Sea ; and, of the ten millions' worth of fish landed on the coasts of the United Kingdom, London absorbs by far the largest share. . . . This great city is also the Colonial Grocers' Shop, not only for the United Kingdom, but for the western part of the continent of Europe. . . . London is also a great fruit-market ; and in the summer and autumn of the year, endless processions of steamers laden with cherries or other fruit may be seen steaming down the Rhine, their cargoes destined for the mart of London. . . . The City is, and has been for many hundreds of years the chief wool-market of England ; and it draws its supplies of wool from Australia, South Africa, and Argentina. . . . Thus London is a "central market of markets," an encyclopædic emporium of the world ; and the most important of its various trades is shipping and carrying for all kinds of industries.

(i) The "Port of London" extends, strictly speaking, from London Bridge to Blackwall, but, practically, to Sheerness, a distance of 60 miles.



### THE PORT OF LONDON

(ii) As the town of London itself contains a population of over 7 millions of people, all of whom require to be fed, its own consumption of food is something very considerable. It is said to consume every year about half-a-million oxen ; nearly two million sheep ; 8 million fowls ; 500 million oysters ; and 400 million pounds of fish.

(iii) "The centre of the world is the Bank of England in Threadneedle Street. There is not an occurrence, not a conquest or a defeat, a revolution, a panic, a famine, an abundance, not a change in the value of money or of material, no depression or stoppage in trade, no recovery, no political, and scarcely any religious, movement,—that does not report itself instantly at this sensitive spot. Other capitals feel a local influence; this feels all the local influences. Put your ear at the door of the Bank or of the Stock Exchange, not far off, and you hear the pulse-beat of the world."

30. **London** is connected by canal with most parts of Great Britain. Goods can be sent by canal from London to Birmingham, Bristol, Liverpool, Leeds, Manchester, and other large towns. . . . London has also an enormous **coasting** trade. There is not a port on the east, west, south, and north of the two islands of Great Britain and Ireland that she does not send ships to. . . . All the great railways of Great Britain are connected with London; and there is not a manufacturing town in this island which is not within 12 hours' distance.

(i) When goods have once been placed on board of a vessel, barge, or steamship, the water-carriage is extremely **cheap**. The only expensive part of the process of transmitting goods is the "handling" or the "breaking bulk." It is cheaper to send a ton of coals by water from Newcastle to South America than it is to send it by rail to London.

(ii) The great trunk lines of railway run to the North. These lines tap all the mining and manufacturing regions of Great Britain. The lines to the South, South-east, and South-west carry chiefly passengers.

- (a) There are, officially, several distinct Londons:—Post-Office London; Police London; Central Criminal Court London, etc. Now, however, London has been created into a County; and there is therefore one **COUNTY OF LONDON**.
- (b) There is no point from which the whole of London can be seen at once. There is no man living who has ever seen all its 28,000 streets.
- (c) London grows chiefly towards the west—like other great cities. The prevalent winds of Europe are westerly; and hence it is from this direction that the purifying breezes come.
- (d) Besides a large number of towns, London contains two cities—those of London and Westminster. It contains more of the history of England than any other English city. London is also the see of a bishop.
- (e) The Port of London extends from London Bridge to the sea; and has also a large number of very large docks. It is the greatest mart for colonial produce in the world.
- (f) "In buildings of the highest historical interest London comes second only to Rome."
- (g) "Of northern capitals London with all its drawbacks is the handsomest."
- (h) "London sits enthroned at the gates of the sea, the mighty centre, commercial, financial, political, social, and intellectual, of a vast realm, where English laws, English institutions, the English tongue, and all the treasures of English literature reign and govern and enrich the lives and the minds of millions of men, generation after generation, all over the globe, with a sovereignty that seems imperishable and destined never to pass away."



## THE COUNTIES OF ENGLAND AND WALES

**Counties.**—England and Wales are divided into fifty-two counties or shires—England containing forty, and Wales twelve. The largest is **Yorkshire**; the smallest **Rutland**.

(a) The four largest are Yorkshire, Lincoln, Devon, and Norfolk. The four smallest are Rutland, Middlesex, Huntingdon, and Bedford.

(b) *Shire* is the noun from the Old English verb *sciran*, to cut. Other words from it are *share*, *shore*, *score*, *sheer*, *short*, *sharp*, *scarp*, *shred*, *sherd*, etc.

(c) "Forty counties England boasts, or in her midst or on her coasts.  
Twenty the stormy seas do face; and twenty fill the inland space.  
Wales adds one dozen to the score: three are inland, nine skirt the shore.  
Thus, for each week in all the year, England and Wales a county count: that's clear."

(i) The six **Northern Counties** are: **Cumberland** and **Northumberland**; **Westmoreland** and **Durham**; **Lancashire** and **Yorkshire**.

(ii) The six **Western Counties** are: **Cheshire**; **Shropshire**; **Hereford**; **Monmouth** and **Gloucester**; and **Somerset**. The first four march with Wales.

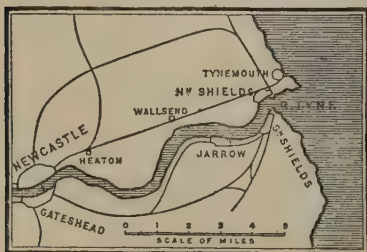
(iii) The five **Eastern Counties**—going from north to south—are: **Lincoln**; **Norfolk**; **Suffolk**; **Essex**; and **Cambridge**, which marches with Norfolk and Suffolk.

(iv) The nine **Southern Counties** are: **Kent**; **Surrey** and **Sussex**; **Berkshire** and **Hampshire**; **Wiltshire** and **Dorsetshire**; **Devon**; and **Cornwall**.

(v) The fourteen **Midland Counties** are: **Stafford**, **Derby**, **Nottingham**; **Worcester**, **Warwick**, **Leicester**, and **Rutland**; **Northampton** and **Huntingdon**; **Oxford** and **Buckingham**; **Middlesex**, **Hertford**, and **Bedford**.

## I.—THE NORTHERN COUNTIES

**1. Northumberland.**—This county (which is twice the size of Durham) consists of a hilly and moorland district, with arable lowlands on the coast. The uplands contain lead-mines; the lowlands, large coal-fields. The largest town is **Newcastle** (266). It is the



THE TYNE DISTRICT.

chief seat of the coal-trade, a great foreign port, and a centre of shipbuilding. The Tyne from Newcastle to the sea is one of the busiest and noisiest regions in the world—one unceasing clang and din resounds as you go up. Shipbuilding yards, factories

for machinery, chemicals, glass, etc., line the banks on both sides. The county town was **Alnwick**, but county business is done now in the largest town.

The word means "Land north of the Humber"; and the old name "Northumbria" covered the ground from the Humber to the Tweed.

(i) The largest towns in the county—**Hexham**, **Newcastle**, **Tynemouth**, **North Shields**—all stand on the Tyne.

(ii) **Berwick-on-Tweed**, though on the Scottish side of the river, is now a part of Northumberland. **Hexham** is a small town in an agricultural district. **Flodden Field**, where James IV. of Scotland fell in 1513, is in the north of the county.

(iii) **Newcastle** "lives by coal and is black with coal." The Tyne banks, from Scotswood to the sea, "are one continuous workshop—shipbuilding, steamers, ironclads, torpedo-vessels, etc.; the manufacture of iron and steel, chemicals, glass-works, cement-works, potteries, etc. etc."—The "Black Gate" is now a Museum of Local Antiquities. It contains Roman altars of all sizes, from those used by a Roman Legion down to the smallest (not larger than an ordinary chimney-piece ornament) required by a private family, stones with inscriptions, Roman pottery—all dug up on the line of the Roman Wall, which stretched from Wallsend to the Solway Firth.

2. **Durham**.—This county (half the size of Northumberland) consists of wide moors on the Pennine slope, and a broad arable plain in the east. Its coal-field constitutes its chief wealth. It is full of busy towns. **Sunderland** is the largest; **Durham** is the county town.

The word *Durham* is a corruption of *Dunholm*—the *holm* or island on the *dun* or hill. The Bishop of Durham signs his name **DUNELM**.

(i) **Sunderland** (151) is a busy seaport as well as a great shipbuilding place.—**Gateshead** (which is joined to Newcastle by several bridges) and **South Shields** are the largest towns in the north; **Darlington**, **Stockton**, and **Hartlepool**—in the Tees basin—are the busiest and richest towns in the south.

(ii) **Sunderland** can boast of very extensive docks, which are mostly employed for the shipment of coal. She has also large grain warehouses, timber yards, engineering works, and shipbuilding establishments.—At **Monkwearmouth**, one of the three parishes in the city is the old Church of St. Peter, which dates from 674, and is the oldest church in the county of Durham.

(iii) **Darlington** is "the cradle of our railway system." The line from Darlington to Stockton was the first line on which locomotives were used. Darlington contains establishments for the making and repairing of locomotives and of rolling stock (railway carriages, etc.); blast-furnaces, which smelt the iron ore of the Cleveland District; mills for making rails, etc. etc. The Quakers of Darlington are wealthy, numerous, and respected.

(iv) **Stockton-on-Tees** contains very large works for the manufacture of marine-engines, shipbuilding yards, blast-furnaces, etc. It also specialises in sail-cloth, procuring its supply of fibres from the Baltic countries.

(v) **West Hartlepool** is a busy coaling-port.

(vi) **Durham**, on the Wear, has one of the noblest Cathedrals in England. It has also a University, one of the colleges of which is in Newcastle.

- (a) "Fixed to the door of the Cathedral is the Norman bronze knocker, by touching which fugitive criminals gained entrance to the sanctuary."  
 (b) "The Collection of Manuscripts, which once belonged to the Monastery of Durham, is unrivalled for the antiquity and the beauty of their illuminations."

**3. Yorkshire.**—This county, the largest and most diversified in England, is a country in itself. It consists of three regions : (i) a high upland—the Moors and Wolds—in the east ; (ii) the Vale of York in the middle ; and (iii) the picturesque valleys on the Pennine slope.—It is also divided into three parts : the **North**, **East**, and **West Ridings**. The West Riding is the richest and most populous, for it contains a very large coal-field, which is the chief seat of the great woollen manufacture of England. The largest towns in the **West Riding** are : **Leeds** (445) ; **Bradford** (288) ; **Huddersfield** (108) ; **Hali-fax** (101) ; and **Wakefield**. Most of them are in the Aire Valley ; and all are engaged in the wool-trade.—**Sheffield** (455), on the Don, in the farthest south, is the seat of the cutlery trade.—**Ripon**, in the north, is a small cathedral city.—**Hull** (278), formerly Kingston-on-Hull, in the south of the **East Riding**, is one of the great ports of England, and has a large Baltic trade. It ranks fifth among the seaports of Great Britain ; London, Liverpool, Cardiff, and Newcastle coming before it. It is "the port for the north of Europe." The port is a very busy one, ships, steamers, fishing-smacks, packets, small boats, constantly coming and going. The largest town in the **North Riding** is **Middlesbrough**, a busy port, and the centre of the Cleveland iron and salt district. Fifty years ago, it was a small unknown village. It stands at the mouth of the Tees, and is "the most remarkable seat of the iron manufacture in Europe." It is also the most remarkable example in England of a rapid rise in population. In 1829 there was one farm house : in 1911 there was a population of 104,000. The Cleveland hills supply excellent iron ; and a bed of rock-salt keeps several chemical works going. **Scarborough** and **Whitby**, two famous bathing-places, stand on the coast. **Northallerton** is famous for the Battle of the Standard in 1138.

The Roman name for *York* was *Eboracum* ; and the Archbishop signs his name *EBOR.*—*Riding* was at first *thrithing* or *thriding*=third part. The awkwardness of the sound of *North Thriding* made the last *th* drop off. (So *tithing*=tenth part ; *farthing*=fourth part.)

(i) **York** (82), the capital of the county, stands on the Ouse, at the meeting-point of the three Ridings. It is one of the most interesting and most historic towns in

England. It was the capital of Roman Britain ; it is the seat of one of the two great archbishoprics of England ; the first English Parliament met here under Henry II. in 1160 ; and, in 1644, Fairfax defeated Prince Rupert, not far off, at Marston Moor. At Stamford Bridge, a few miles east, Harold defeated his brother Tostig ; but the long march south lost him the Battle of Hastings.

- (a) YORK MINSTER is the grandest Gothic edifice in Great Britain. Lincoln Cathedral is said to surpass it in details ; but no other English cathedral rivals it in size, in exquisite proportions, in largeness of design, in completeness of plan, in the magnificence of its Central Tower, and in its rich old stained-glass windows.
- (b) "The famous West Front is more architecturally perfect as a composition and in its details than that of any other English cathedral."
- (c) "The Chapter-House is octagonal, and is not surpassed by any in Europe in size or beauty."
- (d) The city walls are about 3 miles in extent, and are nearly perfect.
- (e) The streets of York are called by the old English name of *Gates* (=roads to go along), such as *Micklegate* (=Great Street), *Goodramgate*, *Stonegate*, etc. etc.

(ii) **Leeds** is the second largest town in Yorkshire ; and it is the sixth in England as regards population. It owes its enormous wealth not to one staple industry ; but to the great variety of its industries and manufactures. But the two most important industries are those of **wool** and **iron**. It has most of the ready-made clothing industry in its hands ; and its woollen trade is unparalleled in England. The annual trade done is said to amount to nearly £12,000,000. There is also an enormous manufacture of leather ; and of boots and shoes. There are large factories for locomotives, agricultural machinery, glass, paper, chemicals, etc. etc. The traffic in and carriage of goods is pursued by rail, canal, and river.

(iii) **Leeds** is "the great commercial capital of Yorkshire, the centre of the clothing trade, and the sixth town in England in size and importance." It is "the greatest cloth-market in the world." Every kind of woollen cloth is made in Leeds and its neighbouring towns ; and, in addition, there are dye-works, bleaching-works, iron-works, machine-yards, brass-foundries, glass-works, cap and shoe-factories on the largest scale, etc.

- (a) "The great manufactories of Leeds are collected for the most part along the banks of the Aire ; and, at night, when the light streams from innumerable windows, this quarter of Leeds is very striking and impressive."
- (b) The YORKSHIRE COLLEGE—in 1904 erected into LEEDS UNIVERSITY, is the chief educational institution in Leeds and in Yorkshire.

(iv) **Bradford** stands on a tributary of the Aire, at the meeting of three river-valleys. It is the chief seat in England of the manufacture of worsted yarn ; but it has of late developed a great variety of industries, such as the weaving of velvet, plush, etc. **Lister's Mills**, for silk and velvet, are among the largest in the world. **Saltaire**, near Bradford, is one of the greatest triumphs of industry in the kingdom. It manufactures every kind of fabric that can be made out of combinations of wool, silk, worsted, mohair, alpaca, and china grass. There are also large coal and iron works in the neighbourhood, which is one of the busiest in England.

- (a) "The great factory and town of **SALTAIRE** (=Salt's factory on the river *Aire*) is ten minutes distance from Bradford. It was at first exclusively devoted to alpaca ; but, since the decline of the "Bradford Trade," it has taken to silks, plushes, etc.
- (b) The **LOWMOOR IRONWORKS** are also near Bradford. They are among the largest ironworks (for plates, bars, and railway tires) in the kingdom, and employ 4000 men.

(v) **Huddersfield** is one of the great "cloth towns" of the West Riding. It owes its rapid growth to its wealth in coal, and its abundant water-power. It is the chief seat of the "fancy trade" in the north of England; but it also manufactures every kind of woollens, and it possesses factories for cotton, silk, machinery, etc. etc. **Huddersfield** is a neat, clean town, built entirely of stone.

(vi) **Halifax** is another West Riding town with a large supply of coal and water-power. Its staple industries are the spinning of **worsted** and the making of **carpets**. Crossley's carpet works are the largest in the world. It possesses also a large number of industries in cotton, iron, chemicals, machinery, etc. **Halifax** is one of the great "clothing towns" of the West Riding. In fact it ranks next to Leeds and Bradford. The merchants carry their goods to Bradford and sell them in that mart.

(vii) **Wakefield** (51) stands on the Calder. Before the rise of Leeds, it was the great capital of the "clothing" trade of Yorkshire.

(viii) **Sheffield**, which stands at the confluence of the Don and the Sheaf (= *Sheaf* field), is a "dreary black and smoky town." Cutlery, silver-plating, iron and steel manufactures of all kinds, form the staple industries of the place.

(ix) **Hull** (formerly **Kingston-on-Hull**) is one of the great ports of England. Though on the east coast, it is one of the outlets for the industrial west, as well as for the east. It is the home of hundreds of steam-ships, which ply to all the chief continental ports on the German Ocean and the Baltic. It is the great outlet for the woollen and cotton goods of Yorkshire, Lancashire and the Midlands, with which it is connected by rail, canal and river. It has also a trade with the United States, with India, and with Australia. Its manufactures are those required by a seaport—ropes, canvas, chains, etc. Seed-crushing for oil is also a staple industry.

(x) **Middlesbrough** is one of the most remarkable instances in England of rapid growth. It ranks, in this respect, with **Cardiff** in Wales, with **Barrow** in England, and with **Chicago** in the United States. (In 1837, Chicago had a population of only 4000; to-day it has nearly two millions, and is second in size and importance to New York alone. It owes this chiefly to its position—as a centre of all the railways and water-ways of the United States.)

4. **Cumberland**.—Cumberland is a mountainous county, with much high pastoral upland. The lovely Eden Vale opens out into a broad plain at Carlisle. In the west, on the Irish Sea, is a small but rich coal-field. The largest town is **Carlisle**, and it is also the county-town.

*Cumberland* means the land of the *Cymri*—the ancient name for a family of Celts, and the name by which the Welsh still call themselves.

(i) **Carlisle** (46), on the Eden, is one of the greatest railway centres in the kingdom. The North-Western, Midland, and several other systems meet there. It has a fine cathedral and an old castle. It also manufactures "cottons, ginghams, and checks." The chief industries are in cottons, hats, and biscuits.

(ii) **Whitehaven** is the chief port for the coal-field; and **Workington** and **Maryport** also export coal. Some of the mines on the Cumberland coal-field extend



several miles under the sea. **Keswick** is a pretty town in the heart of the Lake District.

5. **Westmoreland**.—This county is an upland pastoral region of mountains and hills. There is a little lead in some of the mountains. **Kendal** is the largest town ; **Appleby** is the county town.

The name=*West Moor Land*.

**Kendal** (on the Kent) has some small woollen manufactures—chiefly horse-cloths and railway-rugs. **Appleby**, in a little round wooded valley, is the smallest county town in England.

6. **Lancashire**.—This county (which is nearly twice the size of Durham) consists of a hilly region (Furness) in the Lake District ; an upland region on the western slopes of the Pennine chain ; and a broad plain in the south. Its great wealth and populousness are due to the large coal-field which lies between the Ribble and the Mersey. South Lancashire, like the West Riding, is one of the busiest and most populous places in England. It is thick with towns, most of which are engaged in the cotton manufacture. The two largest towns are **Liverpool** and **Manchester**. The capital is **Lancaster**.—**Liverpool**, on the Mersey, is the second largest town in England, and the second largest seaport. All the great highways of the British Isles converge upon Liverpool ; nearly all the cotton of the world finds its way here, and is distributed over England, Scotland, and the Continent ; and it is the chief emigration port for Europe. The great American Lines of Steamers have their head-quarters here. The shores of the Mersey are lined with the most capacious docks for eight miles. It is connected with its Cheshire suburb, **Birkenhead**, by a tunnel under the river.—**Manchester** (716), on the inky waters of the Irwell, is the market and business centre of the cotton manufacture ; though its factories are now surpassed by those in the outlying towns. It is the centre of a constellation of cotton towns, such as **Oldham** (147), and **Rochdale** ; **Burnley** and **Blackburn** ; **Preston** (117) ; **Bury**, **Bolton** (181), **Warrington** and **Wigan**.—**Salford** (231), another large cotton and iron town, makes one town with Manchester ; and the two together outstrip even Liverpool in population.

Lancashire=*Lancastershire*, or the shire of *Lune Caster*, the Roman camp on the Lune.

(i) **Liverpool** (747) is not only a port for North and South America, but also for all the adjacent manufacturing districts of England. It owes its enormous trade to

its position facing the New World, and to the rise of the cotton industry; and the line of Bishop Berkeley may be applied to it:

“Westward the course of commerce takes its way.”

Two hundred years ago, its population numbered 5000 souls, and its port 80 small vessels; to-day it is one of the great seaports of the world, with the largest and the fastest steamships. The inventions of Hargreaves, Arkwright, and Crompton stimulated the manufacture of cotton cloth; and, whereas, a hundred years ago, we imported cotton to the amount of only one-third of a million sterling, we now pay £70,000,000 a year for the cotton we import. Of this, almost all comes into Liverpool. If we include **Birkenhead** in what may be called “The Port of Liverpool,” we shall find the yearly tonnage of the Port to amount to 10,000,000. The dock-dues, which, a hundred years ago, were £5000 a year, now amount to over £1,000,000 a year. Into Liverpool comes one-fourth of all the imports into the United Kingdom; out of it go two-fifths of all the exports. The Port has 35 miles of quay; and 533 acres of water-space. The spacious docks cost about £20,000,000, and are justly regarded as among the greatest engineering triumphs of the nineteenth century. Seven of the great railway lines of England run into Liverpool.

(ii) The **Manchester Ship-Canal** has deprived Liverpool of some part of her import trade. This great canal (opened in 1894) runs from Eastham, on the Cheshire side of the Mersey, to Manchester—30½ miles. It has made **Manchester into a seaport**: ocean-going vessels now discharge their cargoes of cotton, etc., direct at the Manchester and Salford docks (5½ miles of quayage, 105 acres of water), in the heart of the industrial district.

(iii) **Burnley** (106), standing on a coal-field, has manufactures of cotton, worsted, calico-printing works, iron and brass foundries, machinery, etc.

(iv) **Blackburn** (133) is “now the largest and most important cotton manufacturing town in the world.” Sixty years ago, it had a population of only 30,000. Hargreaves, the inventor of the spinning-jenny, was born here.

(v) **Bury** is another of the cotton-spinning towns which regard Manchester as their centre and capital. John Kay, the inventor of the fly-shuttle, lived in Bury.

(vi) **Bolton** contains more than 100 cotton mills, with over 4,000,000 spindles. The finer calicoes are manufactured here. Crompton, the inventor of the spinning-mule, was a native of Bolton. Standing on a rich coal-field, it also possesses iron-foundries, chemical works, paper-mills, etc.

(vii) **Barrow-in-Furness** is the port for the iron ores of the district, and has the largest steel manufactures in the kingdom. This town was in 1840 a small fishing village with 200 inhabitants; it has now 63,000. The discovery of vast and rich deposits of pure iron ore led to the construction of the railway and immense docks, and to the erection of very large iron and steel works.

(viii) **Manchester** is “the cotton metropolis of England.” Three small streams flow through it—the Irwell, the Irk, and the Medlock. The Irwell separates Manchester from the borough of Salford. All are foul and black as ink: the mills and dye-works that line their banks pour into them all their refuse. Cotton and silk-spinning, chemical and print-works, iron-foundries, engineering and machine-works on the largest scale, are the chief industries of Manchester. The warehouses are tall and vast palaces, “busy as hives and bursting with goods.” Most of the textile industries of



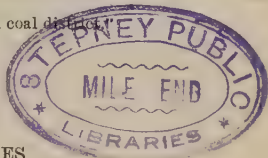
Lancashire are, however, not carried on in Manchester, but in the outlying towns, to which Manchester serves as an exchange, market, and business centre.

(ix) **Oldham** is a town entirely given up to cotton-spinning, hat-making, and machine works. The Platt machine works are the largest in the kingdom.

(x) "**Proud Preston**" is one of the most beautifully situated towns in England. It stands on the steep bank of the Ribble, which is tidal here. Its Town Hall is one of the noblest buildings in the country.

(xi) **Warrington** has numerous iron-foundries, glass-works, and cotton factories.

(xii) **Wigan** is "the metropolis of the Lancashire iron and coal district."



## II. THE WESTERN COUNTIES

**7. Cheshire.**—This county, which is a little larger than Durham, chiefly consists of a rich pastoral plain, which has long produced excellent cheese and butter. The north possesses part of the Lancashire coal-field; the south is rich in salt-mines. The largest town is **Birkenhead**; the county town is **Chester**.

*Cheshire*=*Chestershire*, the shire of the *Chester* or *castra* or camp (the standing camp) of the Romans on the Dee. The main high-road built by the Romans through Britain to the north runs between Dover and Chester.

(i) **Birkenhead** (131), on the Mersey, is really a suburb of Liverpool, and owes its rise to the neighbourhood of that city. It is famous for its docks and its shipbuilding. Fifty years ago it contained only a few houses. Birkenhead, Middlesbrough, and Barrow are the three most remarkable instances in England of rapid growth—more like that of American towns.

(ii) **Chester** (39), on the Dee, is the most singular town in England. It is surrounded by walls; and in the "Rows," there are curious covered walks. Its cathedral, its castle, its old and quaint houses, its towers, its picturesque streets, make it unique among towns. As in York, there are many old Roman remains.

(a) "The Rows are a sort of arcades formed by cutting away the fronts of the first-floor rooms of the houses, allowing a passage for the public, lined at the back with shops, and another row of shops beneath them, on a level with the street."

(b) The walls afford a continuous walk of two miles, with lovely views of the Cheshire Plain, the Dee, etc.

(iii) The towns in the north, **Stockport** (109), **Ashton-under-Lyne**, **Stalybridge**, etc., form part of the cotton circle; **Macclesfield** (34) spins and weaves silk.—**Runcorn**, on the Mersey, has large iron and chemical works.—**Northwich**, and the other towns ending in *wich*, are engaged in the mining of salt. Nantwich produced for more than a thousand years salt from the rich brine springs; but they are now extinct. The narrow streets and Elizabethan timber-houses give the town an old-fashioned and quaint appearance.

(iv) **Ashton-under-Lyne** is "one of the busiest as well as one of the oldest of Lancashire towns."

8. **Shropshire**.—Shropshire or Salop is a county one-third larger than Durham. It is divided into two almost equal parts by the Severn. The north-eastern portion forms part of the Central Plain; the south-western is a hilly region, with the characteristics of Wales. The largest town, which is also the county town, is **Shrewsbury**.

*Shropshire* is a softened form of *Scrob* or *Scrubshire*, called so from the low shrubs that used to cover the land. *Shrewsbury* is also a softened form of *Scrobbesbyrig*=Scrub-borough.

(i) **Shrewsbury** (29) stands on the Severn, not far from the coal-field in the east of the county. It stands on a noble site in an elevated peninsula, formed by the winding of the Severn. The two bridges are called the English and the Welsh Bridge—from the direction of each. The town is rich in quaint old houses. **Wellington, Bridge-north, Coalbrookdale**, etc., are all in the coal and iron district. **Oswestry**, a woollen-manufacturing place, stands in the north-west.

(ii) **Wellington** is the centre of the iron and coal-mining district of Shropshire. Near it is the celebrated conical hill called **The Wrekin** (1320 ft. high), "a remarkable example of eruptive trap." (It was from the Wellington in Somersetshire that Sir A. Wellesley took his title.)

9. **Herefordshire**.—This is a pretty agricultural county, almost bisected by the Wye. It is the flattest and richest of the western counties. The rich red soil produces excellent hops and apples. The county town, which is also the largest town, is **Hereford**.

The word *Hereford* means "ford of the army." It was an important point on the Marches of Wales; as it was one of the few places where an English army could cross the Wye.

(i) **Hereford** (20) is a pretty cathedral town, and carries on a cider-making industry.

(ii) Near **Leominster** is Mortimer's Cross, one of the battle-fields in the Wars of the Roses. The battle was fought in 1461.

10. **Monmouth**.—Monmouth (about half the size of Durham) is a hilly grazing county, with mines of coal and ironstone in the west, next to the South Wales coal-field. Most of the county consists of the Valley of the Usk. Many of the people still speak Welsh. The largest town is **Newport**; the county town is **Monmouth**.

*Monmouth* is=*Munnowmouth*. The Munnow is a tributary of the Wye; and Monmouth stands at the junction.

(i) **Newport** (84), at the mouth of the Usk, is a port for minerals, which are sent down from **Tredegar** and **Pontypool**. The Usk at Newport is navigable for the largest vessels; and extensive docks have been constructed.—At Caerleon, three miles up, the Museum of the town is full of relics of the Roman occupation—tombs, articles of daily use, Roman children's toys, etc.

(ii) **Monmouth**, on the Wye, is the assize town.

11. **Gloucestershire** is an agricultural county, with the coal-field of the Forest of Dean in the west, and the Bristol coal-field in the south. The centre of the county is occupied by the fertile plain of the Severn ; on the west is the elevated Forest of Dean ; and, on the east, the long range of the Cotswold Hills. The largest town is **Bristol** ; the county town is **Gloucester**.

(i) **Bristol** (357), on the Avon of Bristol, is the seventh town in England, a great seaport, and a busy seat of manufactures of tobacco, boots, etc. Its trade is chiefly with Ireland, the West Indies, and South America. The first steamship to cross the Atlantic, the "Great Western," was built in Bristol. The annual tonnage of vessels entering the port is about 2 millions. Bristol is also the capital of the West of England ; and was for several centuries second only to London.

(ii) **Gloucester** (50), on the Severn, is a Cathedral city. **Cheltenham** (48) is a famous inland watering-place. **Stroud** makes woollen cloth.

12. **Somerset**.—This is a grazing county, with wide level plains. On the west rises Exmoor ; in the East the Mendip Hills with picturesque cliffs and caverns in the limestone rocks. The largest town is **Bath** ; the county town is **Taunton**.

(i) **Bath** (50) has its name from the hot baths and mineral waters which have been famous for two thousand years. It was a fashionable place in the time of the Romans ; it is a fashionable place still. It is also a cathedral city : the bishop is the Bishop of Bath and Wells.

(ii) **Taunton** (=Tone-town) stands in the pleasant valley of the Tone. Formerly one of the great "clothier towns" of Somerset, Taunton has a glove-making industry, and is an important agricultural centre for the fertile "Vale of Taunton."—Between Bridgewater and Taunton is **Sedgemoor**, the scene of Monmouth's defeat in 1685.—**Athelney**, the hiding-place of Alfred from the Danes, lies at the junction of the Tone and the Parret.

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### III. THE EASTERN COUNTIES

13. **Lincolnshire**.—This, the second English county in point of size, is an agricultural district. In the north rise the Lincolnshire Wolds ; in the south sinks down the low fen country called Holland (=Hollow Land). The county town is **Lincoln** ; the largest town is **Great Grimsby**.

Lincoln received its name from the Romans, who called it *Lindum*. As it was a Roman colony, it was called "*Lindum Colonia*," which was shortened into *Lincoln*.

(i) **Lincoln** (57) is an ancient cathedral city on the Witham. It stands on the edge of the Oolitic Ridge, and commands a wide view over the Trent valley.

(ii) **Great Grimsby** (74) is a rising seaport on the south shore of the Humber. It is the largest fishing-port in the kingdom. Its trawlers and smacks are chiefly engaged in fishing for herring and cod. The imports and exports of Great Grimsby amount yearly to about £15,000,000. The port has a deep roadstead in front, with capital anchorage. The population had sunk to under 4000; but, since the opening of the Docks and the construction of the railway in 1854, it has risen to 74,000. Timber from the Baltic, grain from Hamburg, ice from Norway, and fish from the German Ocean, come into this port. About a million tons of fish are sent from Grimsby every year all over England.—**Boston** is a small port on the Witham; **Grantham** (where Sir Isaac Newton was born) is an important corn-market on the Great Northern Railway.

14. **Cambridgeshire** (exactly half the size of Somerset) is an agricultural county, nearly all very flat. Its northern half—the Isle of Ely—is fenny and marshy; in the south, it is crossed by the chalk range of the Gog Magog Hills. Its largest town is **Cambridge**, which is also the county town.

Cambridge=Bridge on the Cam. *Cam* is a Celtic word which means *crooked*. The word reappears in *Morecambe* (Bay).

(i) **Cambridge** (40), on the Cam, a tributary of the Ouse, has one of the two great Universities of England.

(ii) **Ely** (= *Eel ey* or *island*) is famous for its cathedral, which stands on a slight rising ground in the fens—once an island in the midst of the waters. In the Isle of Ely rents used to be paid in eels.

15. **Norfolk** is an agricultural and manufacturing county—a gently rolling district, with a light soil on a basis of chalk. In the east are the “Broads”—magnificent sheets of water haunted by crowds of wild-fowl and sea-birds. The largest town is **Norwich**, which is also the county town.

*Norfolk*=*North Folk* or Northern Angles. *Norfolk* and *Suffolk* (=South Folk) form together “East Anglia.”

(i) **Norwich** (121), an ancient cathedral city, a seat of the woollen manufactures, and the capital of East Anglia, stands on the Wensum, a tributary of the Yare. Norwich was the earliest seat of the manufacture of worsted (which received its name from *Worstead*—a village in the east of Norfolk). In addition to worsted, it now manufactures mohair and silk; boots and shoes; starch and mustard.

(ii) **Yarmouth** (55) is a seaport and fishing-port; cures herrings (there are 120 herring houses for curing); and is famous for its excellent roadstead called “Yarmouth Roads.”—**Lynn** (or “King’s Lynn”), at the mouth of the Great Ouse, is the chief port on the Wash.

16. **Suffolk**.—Suffolk is a wheat-growing county, with a heavy soil. The west is a chalk upland; the east is a very low plain with long sea-inlets. **Ipswich** is the county town, and the largest.

(i) **Ipswich** (74), on the Orwell, has large manufactures of agricultural implements.

(ii) **Lowestoft** is the most easterly town in England. It is an important station for the herring-fishery.—**Bury St. Edmunds**, a market-town, was named after St. Edmund, the Saxon king and martyr, who was put to death by the Danes in 870.

17. **Essex**.—The county of Essex has a range of chalk hills in the west; but in the east it sinks into wide muddy flats and marshes, which are greatly cut into by the sea. There is much heavy land good for corn; but the cheap wheat from America and India has thrown most of it into pasture. The largest town is **Colchester**; the county town is **Chelmsford**.

*Essex = East Saxons.*

(i) **Colchester** (43), that is, the *chester* or camp on the Colne, has oyster-fisheries.

(ii) **Chelmsford** (= Chelmersford) stands on the Chelmer. It has a large grain-market.—**Harwich** is a rising port for steam-packets to Belgium and Holland.—**Shoeburyness** is the chief artillery station in Britain.

#### IV. THE SOUTHERN COUNTIES

18. **Kent**.—Kent, the “Orchard of England,” is a smiling county of corn-land and pasture, of hop-gardens, cherry-orchards, apple-orchards, and filbert-orchards. A chalk range—a prolongation of the North Downs, runs through it, and ends in a line of cliffs stretching from Folkestone to the North Foreland. The whole coast is fringed with thriving towns: and **Ashford** inland is an important railway-centre. **Maidstone** is the county town; **Woolwich** the largest.

*Kent is a form of the Celtic word **cann**, a head. The same word is found in the Mull of **Cantire**, in the south-west of Scotland. The spelling with *a* re-appears in **Canterbury**=**Cant-wara** byrig, the borough of the men (*wara*) of **Kent**.*

(i) **Maidstone** (35) = Medway's Town, manufactures paper.—Not far from it, is the triple town of **Chatham**, **Strood**, and **Rochester**. Chatham, on the estuary of the Medway, is the second naval arsenal in the kingdom. Rochester is an ancient cathedral city.—**Sheerness**, on the Isle of Sheppey, is another naval arsenal. The Docks, which are strongly fortified, occupy the north-west part of the Isle of Sheppey. This is a position of the highest importance, as it commands the entrance both to the Thames and the Medway. From the port of **Queenborough**, fast steamers now run to Flushing, in Holland.

(ii) **Woolwich** (121) is the chief military arsenal of Great Britain. It is now a part of London. About 10,000 men are regularly employed in the arsenal; but, in busy times, this number is greatly increased.—**Greenwich**, also a part of London, has a famous Observatory, from which longitude is counted. It is itself, therefore, in

longitude 0°. Greenwich Hospital, a noble building erected, at the request of Queen Mary (William and Mary) by Wren, is now the Royal Naval College. The old seamen have been pensioned off and lodged out. It contains the blood-stained coat in which Nelson met his death at Cape Trafalgar in 1805.

(iii) **Dover** and **Folkestone** are the two steam-packet stations for France—the one connected with Calais, the other with Boulogne.—**Margate** and **Ramsgate**, on the Isle of Thanet (no longer an island), are much-frequented bathing-places.—**Deal** (a “limb” of the old “Cinque Ports”) stands opposite the Goodwin Sands. It was the place where Julius Cæsar landed, B.C. 55, to conquer the Britons. Opposite Deal lie the terrible banks known as the **Goodwin Sands** (these are a part of the estate—so runs a fable—which once belonged to Earl Godwin. The sand rests on a bed of blue clay). In 1703 thirteen British men-o'-war were lost here. Many lightships now warn vessels of their danger. Between the Goodwin Sands and Deal are the capacious roads called **The Downs** (“All in the Downs the fleet was moored”), where from three to four hundred sail may be seen riding at anchor at one time, waiting for a favourable wind.

The original Cinque Ports (=“Five Ports”) were Sandwich, Dover, Hythe, Romney, and Hastings. To these were added Rye and Winchelsea, in Sussex. All of these ports lie opposite to France; and their duty was to provide a navy for the protection of the coasts. Some of them have been silted up.

(iv) **Canterbury** (25), on the Stour, was the old capital of the Kings of Kent, and is the ecclesiastical metropolis of England, the Archbishop of Canterbury being the “Primate of All England.” It is one of the oldest and most beautiful cities in the country. The cathedral was founded in 1070, and rebuilt in 1174. It contains the shrine of St. Thomas à Becket, which enriched, by the offerings made on it, the cathedral and city for hundreds of years.

**19. Surrey.**—The chalk range of the North Downs crosses the county from west to east. The highest point is Leith Hill. Much of the land is heath and wood; the south is a lovely and fertile country. The largest town is **Croydon**; the county town is **Guildford**.

*Surrey = Suth Rice, or “South Kingdom.” We find rice also in the word bishopric.*

(i) **Croydon** (170) really owes its great size to the fact that it is a suburb of London. The specialty of Croydon is the manufacture of church clocks and carillons (bells for chimes).

(ii) **Guildford** (23) is a pretty town on the Wey (an affluent of the Thames), where it cuts a passage through the chalk downs.—**Richmond** is a kind of suburb of London, with a most beautiful park.—**Kingston-on-Thames** possesses the stone on which the Saxon kings sat when they were crowned.—**Runnymede**, where King John signed the Great Charter in 1215, is in the north-west of the county.

**20. Sussex.**—Sussex is a fine agricultural county, with the Weald—once a great forest, in the north, and the South Downs in the southern part. Where the South Downs reach the sea, they form the chalk cliff of Beachy Head. The largest town is **Brighton**; the county town is **Lewes**.

*Sussex = Suth Seaxe, or “South Saxons.”*



(i) **Brighton** (131) is really a seaside suburb of London. It is rightly called "London-super-Mare." In fact, the whole coast is strung with towns which are supported by London visitors—**Worthing**, **Eastbourne**, **Hastings** (with **St. Leonards** running into it), etc. Not far from Hastings is the little town of **Battle**, near which the "Battle of Hastings," more correctly the Battle of Senlac, was fought in 1066. Duke William landed in **Pevensey Bay**—a little east of **Eastbourne**.

(ii) **Lewes** (12) is a small town on the Sussex Ouse.—**Chichester**, in the extreme west, is a cathedral city.

**21. Berkshire.**—The little county of Berks is a fertile agricultural district, the northern part in the Valley of the Thames, the southern in the Vale of Kennet. **Reading** is the county town.

(i) **Reading** (75), the "Town of Biscuits," stands at the junction of the Kennet with the Thames.

(ii) **Windsor Castle**, above the town of Windsor, is the chief royal residence of the Sovereigns of England.—**Wantage**, the birthplace of Alfred the Great, king of Wessex, is also in this county.

**22. Hampshire.**—Hampshire (or Hants) is an agricultural county, with low chalk hills which run into the North Downs,—a plain in the middle, which is a continuation of Salisbury Plain, and in the south, another range of heights which runs into the South Downs. In the south-west is the **New Forest**. The largest town is **Portsmouth**; the county town is **Winchester**.

*Hampshire is short for Southamptonshire; the legal title is "the County of Southampton."*

(i) **Portsmouth** (232)—really four strongly fortified towns joined into one (**Portsea**, **Southsea**, and **Gosport** are the others)—is the greatest naval arsenal in the kingdom. **Landport** was the birthplace of Charles Dickens in 1812.

(ii) **Southampton** (120), at the head of the estuary called Southampton Water, is a large port for passenger steamers to all parts of the world. The splendid harbour of Southampton accommodates steamers for the West Indies and Brazil; for the Cape; those of the North German Lloyd, for New York; and many local lines.

(iii) **Winchester** (20) is an ancient cathedral city, with a great public school. It was the capital of Wessex, and, for a time, also the capital of England.

(iv) The **Isle of Wight** forms part of Hampshire. It is a lovely and fertile island, and has been called the "Garden of England." **Newport**, **Ryde**, **Ventnor**, and **Cowes** are places of residence, sea-bathing, or yachting stations. Near Newport is **Carisbrooke Castle**, where Charles I. was imprisoned. **Osborne** was one of Queen Victoria's residences, and she died there on January 22nd, 1901.

(v) The arm of the sea to the east of the island is called **Spithead**; to the west, the **Solent**. The isolated rocks to the west, pared down by the sea and "weathering," are called the **Needles**.



**23. Wiltshire.**—Wiltshire (or Wilts) is an inland agricultural county, with the Marlborough Downs in the north, and a wide chalk upland called **Salisbury Plain**, in the south. It contains the headwaters of three drainage-systems; and sends water into the Thames (by the Kennet), the Severn, and the English Channel. From Inkpen Beacon, in the east of the county, branch out four ranges of hills: the Chiltern Hills, the North Downs, the South Downs, and the Dorsetshire Downs. The largest town is **Swindon**; the county town is **Salisbury**.

(i) **Salisbury** (21) is a cathedral city, on the Avon of Salisbury. The cathedral is one of the most graceful in England, and has the highest spire. The spire is 404 ft. high (34 ft. higher than St. Paul's).

(ii) **Swindon** (50) contains the engineering and carriage-works of the Great Western Railway.

(iii) On Salisbury Plain stands the remains of an old Druid open-air temple—**Stonehenge**.

**24. Dorsetshire.**—Dorsetshire is an agricultural county, with a light soil and a thin population. (The population of the whole county is not equal to that of Newcastle.) It consists of a plain between two belts of downs. The popular division is into “the sands,” “the chalks,” and “the clays.” The largest town is **Weymouth**: the county town is **Dorchester**.

(i) **Weymouth** (22) is a watering-place, which George III. made fashionable. It runs steam-packets to the Channel Islands. **Dorchester** (9) was an old Roman town.

(ii) **Portland Isle**, which is really a peninsula connected with the mainland by a long beach of shingle called **Chesil Bank**, has large quarries of good building-stone, and contains a convict prison. The “Trough of Poole,” a barren waste, yields blue clay for the Potteries of Staffordshire.

*Chesil Bank is a neck of land ten miles long—“a ridge of millions of loose pebbles” (the word Chesil is found in Chelsea=Es or island of Chesil).*

**25. Devonshire.**—Devonshire is, like Yorkshire and Kent, a country in itself. In the north is the high moorland called **Exmoor**, which also runs into Somerset; in the south are the bare granite uplands of **Dartmoor**. The low grounds are very fertile; and the warm moist climate favours a luxuriant vegetation. The Vale of Exeter is the most fertile part. It is a grazing, an orchard, and also a mining county. The largest town is **Plymouth**; the county town is **Exeter**.

(i) **Plymouth** (112, but with **Devonport** and **Stonehouse**, which are next it, 207) stands on the noble estuary called Plymouth Sound, and is one of the chief stations for our Navy. In front of the Sound is a breakwater a mile long; and, 14

miles off, rises Eddystone Lighthouse. It was on **Plymouth Hoe**, an elevated piece of ground which slopes towards the Sound, that Sir Francis Drake and his friends were playing bowls when the Spanish Armada appeared in 1588.

(ii) **Exeter** (46) is an ancient city, built before the Romans came, with a beautiful cathedral. It is the "Queen of the West." **Torquay**, on the northern horn of Torbay, is a very warm place of residence for invalids.

(iii) The county has many small seaports, both on the Bristol Channel and the English Channel. Thus we have **Exmouth** on the Exe; **Dartmouth** on the Dart; **Sidmouth** on the Sid; **Barnstaple** on the Tawe, etc. William of Orange landed in Torbay in 1688.

*Tor* means "projecting rock."—*Exeter* was formerly *Exanceaster*, the *caster* (castra) or camp on the Exe.

**26. Cornwall.**—Cornwall is a county of hills and rocks, of cliffs and headlands, of "sheltered bays and white-beached sandy coves." The soil is thin; the chief wealth of the county consists in its fisheries (pilchards) and its mines. The old Cornish toast was "Fish, tin, and copper!" The largest town is **Penzance**; the county town is **Bodmin**.

*Cornwall*=*Corn wealhas*—the *wealhas* or *Welsh* (=foreigners) on the horn or peninsula. The old name was "West Wales." The Cornish language, akin to Welsh, died out in the 18th century.

(i) **Penzance** (13)—(the word means "Holy Head")—is the most westerly borough in England, and the extreme terminus of the Great Western Railway. Penzance is also the chief seat of the pilchard and mackerel fishery, which takes place in the months of August and September. Nothing can exceed the liveliness of the scene in these months—hundreds of fishing-boats sailing in, landing their cargoes, sending them off by rail, and steering out again. In the neighbourhood of the town there are large market-gardens, which send tons of early potatoes and cauliflowers to London and Bristol in the beginning of summer.

(ii) **Bodmin** (5) is the county town; but **Truro** (11) is looked upon as the capital of the mining district. (The tin and copper imported from America and Spain have caused the abandonment of many mines.) **Launceston** is also a mining town. **Falmouth** is one of the noblest harbours in the country; but it is too far from the industrial centres to become a great port. It is the centre of the "Land-Hemisphere" of the globe.

(iii) The **Scilly Isles**, off the coast, send early vegetables and flowers to London.

## V. THE MIDLAND COUNTIES

**27. Staffordshire.**—Staffordshire is a mining, manufacturing, and agricultural county. The northern part contains the Potteries Coal-field; the middle is part of the Central Plain; the south contains the coal-field of the Black Country. In this county green pasture-fields alternate oddly with tall factory-chimneys, derricks over coal-

mines, blazing foundry furnaces, and unsightly slag-heaps. Its pastures produce the leather which the town of **Stafford** makes into boots. The largest town is **Wolverhampton**; the county town is **Stafford**.

*Stafford* is = *Staff* or *Stave-ford*, the ford on the Sow (an affluent of the Trent) that needs a staff to cross it with. Near it is *Stane-ford*, the ford crossed on stepping-stones.

(i) **Wolverhampton** (94), **West Bromwich**, **Walsall**, **Wednesbury**, etc., are all engaged in different kinds of iron manufactures. **Wolverhampton** is the centre of a group of towns.

(ii) **Wolverhampton** is the capital of South Staffordshire, and stands on the edge of the "Black Country." In addition to all kinds of hardware, it makes locks (Chubb's), japanned and papier-maché articles.

(iii) **Walsall** is the capital of the manufacture of harness, of carriage-lamps, and other things of a similar character.

(iv) **Wednesbury** has, as its specialty, the manufacture of railway axles, tubes, and tires for wheels, etc.

(v) **Burton-on-Trent**, in the east, brews immense quantities of beer, which is exported to all parts of the world. There are thirty brewing firms in the town, the two largest of which are those of **Allsopp and Co.**, and of **Bass and Co.** (The latter employs 2000 hands.) The town is traversed by thirty miles of rail for carrying the barrels to and from the station; and a beer train is sent off almost every hour of the twenty-four.

(vi) In the **Potteries**, seven towns stand close together, the best known of which are **Hanley**, **Stoke-upon-Trent**, **Burslem**, and **Etruria**, and all of which are engaged in "potting."

(vii) **Stoke-upon-Trent** is the metropolis of the Pottery District. It contains a statue of **Josiah Wedgwood**, the founder of art-pottery.

(viii) **Stafford** (23), the county town, makes boots and shoes.—**Lichfield**, a cathedral city, was the birthplace of **Dr. Samuel Johnson**.

**28. Derbyshire.**—Derbyshire is a mining, manufacturing, and agricultural county. In the north we find the hilly region called "The Peak," which is the end of the Pennine Chain; the east forms a part of the Leeds and Nottingham Coal-field; and the south is a rolling pastoral country, which forms part of the Central Plain. There are many lead and iron mines in the county. The largest town, which also is the county town, is **Derby**.

(i) *Derby* is = *Deorby*, the *by* (town) of *Deer*. In Old English *deer* meant any wild beast.

(ii) "The Peak" is not a *peak*, but a high mountainous limestone country, with vast caverns and underground rivers.

(i) **Derby** (120), on the **Derwent** (a tributary of the Trent), is a seat of the silk manufactures. The first silk-mill was established here in 1717. It also manufactures cotton, lace, hosiery, iron, etc. It has the immense advantage of being a great railway centre. The town has also a brisk trade in stockings, in cheese, and in iron. It is also the headquarters of the **Midland Railway Works**, which employ over 7000 hands.

(ii) **Glossop** (20) is the centre of large cotton-works.—**Chesterfield** has manufactures in wool, cotton, and silk.—**Matlock** and **Buxton** are noted for hot mineral springs.

**29. Nottinghamshire.**—The county of Notts is a long belt of low rolling country, traversed by the Trent. The largest town is **Nottingham**, which is also the county town.

(i) **Nottingham** (260), on the Trent, is the centre of lace-making in England, and also manufactures hosiery, etc. It is indeed the metropolis of the hosiery and lace manufactures.

(ii) **Newark** is a notable corn and malt centre.

(iii) The **Forest of Sherwood**, in the west of the county, famous for the exploits of Robin Hood, is a remnant of the primeval forest that once covered almost the whole county.

**30. Worcestershire.**—Worcestershire is a grazing county in the central valley of the Severn. The north has coal and iron mines, and forms part of the "Black Country"; in the west are the Malvern Hills; and the south is famous for its orchards and hop-gardens. **Dudley** is the largest town; the county town is **Worcester**.

(i) **Dudley** (51) stands on the South Staffordshire Coal-field, and is engaged in the coal and iron trade, hardware and glass; and in nail-making manufactures (and more especially in the making of anvils, vices, etc.).

(ii) **Kidderminster** makes Brussels carpets; **Stourbridge**, glass and pottery; **Droitwich**, salt, from its brine-springs.

(iii) **Worcester** (46), a beautiful town on the Severn, has a cathedral, and is famous for its blue porcelain and its gloves; the latter business employs 8000 persons. Cromwell gained a victory here over Charles II. in 1651.—**Malvern** is a lovely place of residence for invalids. The air is clear and bracing.

"Round about the Malvern Hill  
A man may live as long as he will."

(iv) **Evesham**, in the Vale of Evesham, was the scene of the battle fought in 1265, in which Earl Simon de Montfort fell.

**31. Warwickshire.**—This county—the central county of England—lies in the very heart of the Midland Plain, and is traversed by the Avon of Warwick—a tributary of the Severn. In the north is a small coal-field, and this part is one of the busiest manufacturing districts in England. **Birmingham** is the largest town: the county town is **Warwick**.

(i) **Birmingham** (525), as the chief town of the Midlands, stands near the centre of England. In the finer metal manufactures it is not only unsurpassed, it is unrivalled, by any town in the world. Work in gold, silver, copper, steel, and mixed metals is done

in the most artistic style ; and all kinds of jewellery, toys, ornaments, ammunition, and



every sort of small-ware, are made. Gun-barrels in hundreds of thousands ; buttons in millions, and steel-pens in thousands of millions, are annually turned out. Birmingham is the capital of English "notions." No city is better supplied with educational institutions, and with colleges for the advancement of the arts and sciences. The population, a hundred years ago, was only 30,000 ; it is now seventeen times that number.

It is the fourth largest town in England and the greatest hardware manufacturing town in the world. It makes anything, from a pin or a steel-pen to a hundred-ton gun or a man-o'-war's anchor. It is the metropolis of the hardware, machinery,

glass, gun, small-arms, steel-pen, silver-plate, toy, button, screws, and small-ware manufactures. Over half-a-million gun-barrels are manufactured yearly. Near Handsworth, a suburb, stood the famous Soho works, where Watt and Boulton made the first steam-engines ever employed in our industries.

(ii) **Coventry** (106), which used to make silk ribbons, has now turned its energies to bicycles, motor-cars, watches, and clocks.—**Leamington** is a pleasure-town, much affected by Americans.—**Rugby** has a famous public school.

(iii) **Warwick** (11), on the Upper Avon, the county town, has a magnificent baronial castle.—**Stratford-on-Avon** was the birthplace of William Shakespeare, in 1564. At **Edgehill**, in the south-east, Charles I. fought a battle in 1642.

**32. Leicestershire.**—This is an agricultural county, with considerable manufactures. It lies in the Central Plain, but contains some hilly and rocky ground in Charnwood Forest. In the north-west is the small coal-field of Ashby-de-la-Zouch. The largest town, which is also the county town, is **Leicester**.

Leicester was a fortified Roman town ; and the name is a corruption of *Legionis Castra*—the Camp of the Legion.

(i) **Leicester** (227), on the Soar, is a great centre for woollen manufactures, boots and shoes, etc. In 1801, Leicester had a population of only 17,000. To-day, it has about 13 times that number. This enormously rapid growth is due to its enterprise, its central position in the heart of England, its transit facilities by three railway systems and by several canals. It vies with Nottingham in the making of hosiery, and with Northampton in the manufacture of boots and shoes.—**Loughborough** is also engaged in the manufacture of hosiery.

(ii) **Bosworth Field**, where Richard III. fell in 1485, in the last battle of the Wars of the Roses, lies a few miles west of Leicester. It was at **Leicester Abbey** that Cardinal Wolsey died in 1530, as he was journeying to London, broken and stricken with disease, in obedience to a summons from Henry VIII.

**33. Rutland.**—Rutland is the smallest county in England. It is a farming county, and grows good wheat. The county town is **Oakham**.

Rutland=Red Land.

**Uppingham** is famous for its public school.

**34. Northamptonshire.**—Northamptonshire, a rolling country with a fertile soil, consists chiefly of the Valley of the Nen. The north is fen-land. **Northampton**, the largest town, is also the county town.

(i) **Northampton** (121), on the Nen, is the boot and shoe-making town of England. **Kettering**, **Wellingborough**, and other towns, also make shoes.—**Naseby**, where Cromwell gained a victory in 1645, is about twelve miles from Northampton.

(ii) **Peterborough** (30) has a beautiful cathedral, in which Catherine, the first wife of Henry VIII., and Mary Queen of Scots, were buried; but the body of the Scottish Queen was removed to Westminster Abbey by her son in 1612.

**35. Huntingdonshire.**—Huntingdonshire (or Hunts) is a gently undulating dairy county, with flat fen-lands in the north. The population of the whole county is not half that of Brighton. The county town is **Huntingdon**; and it is also the largest town.

**Huntingdon** (4), on the Great Ouse, was the birthplace of Oliver Cromwell (1599).

**36. Bedfordshire.**—Bedfordshire (or Beds) is a small agricultural county, with some flat fen-land. The county town is **Bedford**.

**Bedford** (40), on the Great Ouse, was the birthplace of John Bunyan in 1628. It has an excellent Grammar School.—**Luton** and **Dunstable** manufacture straw-plait.

**37. Oxfordshire.**—Oxfordshire is an agricultural county. It consists of a long strip of land on the left bank of the Thames, with the chalk range of the Chiltern Hills, which are richly wooded, in the south. The county town is **Oxford**.

(i) **Oxford** (56), on the Thames, has one of the two great Universities of England. It is also a bishopric; its cathedral is Christ Church college-chapel. The city itself, with its noble college-buildings, is one of the most beautiful in the world.

(ii) **Woodstock** was once a royal manor.—**Chalgrove Field**, in this county, was the place where John Hampden received his death-wound in a skirmish (in 1643).

**38. Buckinghamshire.**—Buckinghamshire (or Bucks) is a dairy county. It has chalk hills—the Chilterns—in the south; the rich Vale of Aylesbury in the centre; while the northern part belongs to the basin of the Great Ouse. **Aylesbury** is the assize town.



(i) **Buckingham** (3), on the Great Ouse, is a quiet country town.—**Aylesbury** (9) makes condensed milk.—**High Wycombe** (20), the largest town, makes chairs and furniture.

(ii) **Eton**, on the Thames, right opposite Windsor, is the greatest public school in England. Many of our great statesmen, and some of our great poets (Gray among others) were educated there. The school was founded by Henry VI. in 1440.

**39. Hertfordshire.**—Hertfordshire (or Herts) is a chalk district, with uplands in the south. It grows a good deal of corn. It also possesses small industries in paper-making and straw-plaiting. The county town is **Hertford**; the largest town is **Watford** (40).

**Hertford** (9) is a pretty little town on the Lea.—**St. Albans** (16) is now the see of a bishop, and contains a fine Abbey Church in the Norman style. (A Roman soldier, Albanus, was the first martyr to Christianity in Great Britain.)—**Barnet**, almost a suburb of London, was the scene of a battle in 1471, in which the Earl of Warwick, the 'King-maker,' was slain.—**Watford** is noted for its ales.

**40. Middlesex.**—Middlesex is the second smallest county in England. It is only one-fifth the size of Kent. But it is one of the most densely peopled counties; for it contains by far the largest part of LONDON. It is low and level towards the Thames; but, in the north, it has many picturesque hills, among which are Harrow Hill and Hampstead Heath. The county town is **Brentford**—a small town on the Brent.

(i) The population of this county is larger than that of all Scotland.

(ii) **Harrow-on-the-Hill** is the seat of one of the great Schools of England.

## VI. THE WELSH COUNTIES

**1. Divisions of Wales.**—The Principality of Wales is usually divided into **North Wales** and **South Wales**, each containing six counties.—The six counties of North Wales are: **Anglesea**, **Carnarvon**, **Denbigh**, and **Flint**; **Merioneth** and **Montgomery**.—The six counties of South Wales are: **Cardigan** and **Radnor**; **Pembroke**, **Carmarthen**, and **Brecknock**; and, in the farthest south, **Glamorgan**.

**2. Anglesea.**—This county is an island, which is separated from the mainland by the Menai Strait. It has a small coal-field. **Holy-**

**head**, on Holy Island, is the largest town; the county town is **Beaumaris**. The straits are crossed by two bridges—tubular and suspension.

*Anglesea*—the *ea* or island of the *Ongul* or strait (the Menai Strait) was so named by the Scandinavian sailors, who often visited its shores.

**Holyhead** is the packet-station, on the North Western Railway system, for Dublin.

**3. Carnarvon.**—This county contains the highest ranges and the grandest scenery in Wales. The highest point is **Snowdon** (3570 ft.). The county town is **Carnarvon**; the largest town is **Bangor**.

(i) **Carnarvon** has a noble castle, where Edward II.—the first “Prince of Wales”—was born in 1284.—The castle at **Conway**, near Llandudno, is one of those which were built by Edward I. to keep down Wales.

(ii) **Llandudno**, at the foot of Great Orme's Head, is a bathing-place frequented by people from Lancashire and Yorkshire.—There are large slate-quarries near **Bangor**, which is the seat of a bishopric.

**4. Denbighshire.**—Denbigh is a hilly county, with a coal-field in the north-east. It has also mines of lead, iron, and slate. The county town is **Denbigh**; the largest town is **Wrexham**. (18).

**Denbigh** stands in the quiet agricultural Vale of Clwyd; **Wrexham** is the centre of a busy mining district.

**5. Flintshire.**—This county is a narrow strip of land between the estuary of the Dee and the Vale of Clwyd. A rich coal-field lies between the towns of Mold and Flint. There are also mines of iron, zinc, and lead. **Flint** (5) is the largest, and also the county town.

**Holywell** stands in the middle of the coal-district; and there are numerous lead, iron, copper, and zinc mines in its neighbourhood. The well of St. Winifred (which gives the name to the town) is still the scene of many pilgrimages. It throws up 20 tons of water a minute. The sides are clothed with sweet-scented moss.

**6. Merioneth.**—Merionethshire is a tract of wild hilly ground, from which the peak of **Cader Idris** towers to the height of about 3000 ft.—with other high summits near it—over Bala Lake, the largest sheet of water in Wales. **Dolgelly** is the county town.

**Dolgelly** makes Welsh flannel. **Festiniog**, the largest town, has famous slate quarries.

**7. Montgomeryshire.**—This county is a hilly district, which contains mines of lead and copper; quarries of stone and slate. More lead is mined here than in any other Welsh county. Montgomery contains the head-waters of the Severn and the Wye. **Newtown** is the largest, **Montgomery** the county town.

**Welshpool**, at the head of navigation on the Severn, has a large trade in Welsh flannels.—**Newtown** also manufactures flannels.

**8. Cardiganshire.**—This county is a fine sweep of land round Cardigan Bay ; low on the coast ; then with high uplands ; last with mountain-ranges, the highest point in which is Plinlimmon. There are mines of lead, zinc, and copper. **Aberystwith** is the largest town ; **Cardigan** is the county town.

**Aberystwith** is a bathing-place at the mouth of the Ystwith. **Cardigan** is a fishing-port at the mouth of the Teify. (The Teify was the last resort of the British beaver.)

*Aber* is a Celtic word meaning *mouth*. We have the word in *Abergele*, *Berwick* (= *Aberwick*), etc.

**9. Radnor.**—This county lies mostly in the basin of the Wye, and is a district of elevated pastoral moorland. It is the most thinly peopled county in South Britain. The county town is **Presteign**. **Llandrindod Wells** is the largest town.

**Llandrindod Wells**, as its name implies, has mineral springs.

**10. Pembrokeshire.**—Pembrokeshire is a peninsula bounded by the sea on every side except the east. It is a county of low hills. A long narrow strip of coal-field runs through it. In the south is the magnificent natural harbour of Milford Haven. The county town is **Pembroke**, which is also the largest.

(i) **Pembroke**, like the other chief towns, stands on Milford Haven. **St. David's** is the cathedral city of the county.

(ii) **Milford Haven** has so many branches, arms and roadsteads, that there are sheltering places from every wind that blows. Nelson thought it the finest harbour in the world ; and it would hold easily the whole of the British navy. In shape and character it is very like the harbour of Sydney, New South Wales. It stretches for 10 miles inland : has five bays, ten creeks, and thirteen roadsteads. It is strongly fortified.

**11. Carmarthenshire.**—This county, the largest in Wales, consists chiefly of the Valley of the Towy. Part of the county stands on the great coal-field of South Wales. **Llanelly** is the largest ; **Carmarthen** the county town.

**Llanelly** (32) is a port which ships coal, iron, copper, and tin. It was a mere village sixty years ago. It has now large copper works ; and also silver, lead, iron, and tin works.

**12. Brecknock.**—Brecknockshire (or Brecon) is an elevated pastoral district lying along the head-waters of the Wye and Usk. It also touches the northern edge of the South Wales Coal-field. **Brecon**, on the Usk, is the county town.

**13. Glamorganshire.**—The northern part of this county is hilly ; the south—the “Garden of Wales”—is level and very fertile. It is by far the most populous and most wealthy of all the counties of Wales ; and it is the only county in Wales with large towns. This is due to the fact that it contains the greater part of the most extensive and important coal-field in Great Britain—the **South Wales coal-field**—“The largest storehouse of coal and ironstone in this island.” It fills an area of 1000 square miles. The Vale of Taff is the chief mining and manufacturing district. The largest town is **Cardiff**, which is also the county town, and the chief seaport of the whole of Wales.

(i) **Cardiff** (182) is a town that has grown with immense rapidity. In this respect it ranks above Middlesbrough, Birkenhead, and Barrow-in-Furness. In fact its progress is more remarkable than that of any town or city in the kingdom. In 1801 the population was 2000 ; it is now more than ninety times that number. It is the greatest coal port in the world. It is also the outlet for the metals, minerals, and manufactures of the central part of the South Wales coal-field, a region in which stand the populous districts of Merthyr Tydvil, Aberdare, Rhymney, and the Rhondda Valley. There are immense docks connected with the port ; and the Bute docks alone cost £4,000,000 sterling. In point of tonnage Cardiff is the second port in the United Kingdom, its average yearly “movement”—15½ million tons—being just ahead of that of Liverpool (14½ million tons), but some way behind London (18½ million tons). Cardiff’s special imports are iron, copper, tin, timber, and grain.

(a) In 1801, the population of CARDIFF was 2000 : in 1891 it was 128,000 : in 1901 it was 165,000.

(b) In 1839, the annual export of coal from the Port of Cardiff was 4500 tons ; in 1889, it was over 9,000,000 ; in 1913 it was over 20,000,000 tons.

(c) NEWCASTLE has been, for hundreds of years, the chief place for the export of coal ; CARDIFF now exports half as much again as all the Tyne Ports put together.

(ii) **Merthyr Tydvil** (81), the third largest town in Wales, stands in the centre of the South Wales coal-field, and manufactures large quantities of steel.

(iii) **Swansea** (115), on Swansea Bay, the second largest town in Wales, is chiefly engaged in copper-smelting. It is cheaper to bring the copper to the coal, than to carry the coal to the copper. Hence ships bring copper ore here from Spain, South America, etc. etc. Nine-tenths of all the copper smelted in England is smelted here. Swansea is also an important seaport.

**14. The Isle of Man.**—The Isle of Man lies in the Irish Sea, almost equidistant from Scotland, England, and Ireland. It is about one-fifth smaller than Middlesex ; but the population is under 60,000. A mountain-range fills the larger part of the island ; and the highest summit is **Snaefell** (2024 feet). There are a few lead-mines ; but the chief industries are agriculture and fishing. The largest town is **Douglas**, which is also the capital.

The old name for *Man* was *Mona* (which was also the ancient name for Anglesea). *Snaefell* is Norse for *Snow-hill*. *Man* was at one time a part of the Scandinavian kingdom of the "Southern Isles."

(i) **Douglas** is a well-known bathing-place.—The other towns are **Castletown** (the former capital), **Ramsey**, and **Peel**. Peel is the headquarters of the herring fishery.

(ii) **Manx** is a dialect of the Irish branch of the Celtic language. It is like Gaelic—the language spoken in the Highlands of Scotland. **Manx** is not taught in any of the schools, and will probably soon become extinct.

**15. The Channel Islands.**—These islands are, geographically considered, a part of France ; but they have been attached to the kingdom of England since Duke William of Normandy began to reign in this country (1066). The largest and best-known islands are **Jersey**, **Guernsey**, **Alderney**, and **Sark**. The area of the whole is about one-half that of Rutland ; and the population is over 95,000. The language spoken is Old Norman-French. The climate is warm ; and fine fruits flourish on the islands. Guernsey pears are famous. The two largest towns are **St. Helier** and **St. Pierre**.

(i) **St. Helier** is the capital of Jersey.

(ii) The capital of Guernsey is **St. Pierre**.



## SCOTLAND

**1. Introductory.**—Scotland is the part of Great Britain which lies north of the Cheviot Hills and the Tweed. It is a much more mountainous country than England; and the northern part of it resembles Scandinavia in its scenery, its coast line, and the large number of its islands.

Scotland (=“Land of the Scots”) received its name from an Irish tribe who settled in the Mull of Cantire in the 6th century. The older name was **Albyn** (=“the land of white heights”); and the Romans called the country **Caledonia**.

**2. Boundaries.**—Scotland is bounded :—

1. **N. and W.**—By the **Atlantic Ocean**.
2. **E.**—By the **North Sea**.
3. **S.**—By **England** and the **Irish Sea**.

(i) The line between England and Scotland is formed by the Solway Firth, the Cheviot Hills, and the Tweed.

(ii) The south-west of Scotland lies opposite Ireland.

(iii) The east of Scotland lies opposite Denmark and Norway.

**3. Size.**—The area of the mainland of Scotland is about half that of England. The area of Scotland with its islands is a little more than half that of England and Wales.

(i) The area of the mainland amounts to over 26,000 square miles.

(ii) With the islands, the area is 29,785 square miles.

(iii) The islands number 788, of which 600 are uninhabited.

(iv) The longest line, from the Mull of Galloway to Dunnet Head, is 288 miles.

(v) The breadth varies from 175 miles to 32 miles.

**4. Shape.**—The coast line is extremely long in comparison with the size of the country. It reaches the high total of 2500 miles, which gives one mile of coast line to every 12 square miles of area. Thus there is no part of the country that is more than 40 miles from sea-water.



(i) The coast line is 700 miles longer than the coast of England—a country much larger.

(ii) Greece and Norway are the only two countries in Europe that have as long a comparative coast line.

(iii) The most northerly point is **Dunnet Head**; the most southerly, the **Mull of Galloway**; the most easterly, **Buchan Ness**; and the most westerly, **Ardnamurchan Point**.

**5. The North Coast.**—The North Coast is composed of hard rocks,—is wild, rugged, cleft with deep fissures, and varied by high and bold headlands.

(i) The chief openings are: **Dunnet Bay** and **Loch Eriboll**.

(ii) The chief capes are: **Dunnet Head** and **Cape Wrath**.

**6. The East and West Coasts.**—The contrasts between these coasts are very striking; and it may be well to set them forth in order

The East Coast	The West Coast
1. Is somewhat like the east coast of England.	1. Is very like the coast of Norway.
2. Is formed of soft sandstone and clays.	2. Is formed of hard rocks.
3. Is very regular and little indented.	3. Is highly irregular, and has very deep indentations.
4. Is generally low and shelving.	4. Is like a mountain-wall.
5. Has very few islands.	5. Is guarded by a double row of islands.
6. Has a gradual slope with long rivers.	6. Has a steep slope with short rivers.
7. The openings have the Scandinavian name of <i>Firth</i> .	7. The openings are called by the Celtic name <i>Loch</i> .
8. The headlands have the Scandinavian name of <i>Ness</i> .	8. The headlands have the Celtic name of <i>Mull</i> .

**7. The East Coast.**—The East Coast is in general low and monotonous; but it is marked by bold headlands, which are the ends of mountain-ranges or of mountain-spurs running out into the sea.

(i) The chief openings are: **Dornoch Firth**; **Cromarty Firth**; **Moray Firth**; the **Firth of Tay**; and the **Firth of Forth**.

(ii) The chief headlands are: **Duncansby Head** (in Caithness); **Tarbet Ness** (in Cromarty); **Kinnaird Head** (in Aberdeenshire); **Buchan Ness** (in Aberdeenshire); **Budon Ness** (in Forfar); **Fife Ness**; and **St. Abb's Head** (in Berwickshire).

8. **The West Coast.**—The West Coast is distinguished by deep-drawn sea-lochs (most of them trending to the north-east), by rocky shores, long peninsulas, and steep headlands.

(i) The chief openings are: **Loch Broom** (in Ross-shire); **Loch Linnhé** (which is continued into Loch Eil and the Caledonian Canal); **Loch Fyne**; the **Firth of Clyde** (which is connected with Loch Long); and **Loch Ryan** (in Wigtownshire).

(ii) The chief capes are: **Ardnamurchan Point**; the **Mull of Cantire** (both in Argyllshire); **Mull of Galloway**; and **Burrow Head** (both in Wigtownshire).

9. **Islands.**—North Britain has a very much larger number of islands on its coasts than South Britain; and these islands lie mainly in the north and west. The western groups form a strong double breakwater against the violence of the Atlantic billows. The whole may be divided into four systems: The **Orkneys**; the **Shetlands**; the **Hebrides**; and the **Firth of Clyde Islands**.

(i) The **Orkneys** lie north of Great Britain. The largest is **Pomona** (or **Mainland**); and the chief town is **Kirkwall**.

(ii) The **Shetlands** lie north-east of the Orkneys. The largest is **Mainland**; and the chief town is **Lerwick**.

Most of the names of the islands in these groups end in *a*. This is a form of the Norse word *oe* = island. Thus *Sanda*=*Sand Island*; *Westra*=*West Island*, etc. Other names are *stacks*, *skerries*, and *holms*.

(iii) The **Hebrides** are composed of the Inner and the Outer Hebrides. The Inner Hebrides lie close to the coast, and are mostly masses of volcanic rock. The largest are **Skye**, **Mull**, **Jura**, and **Isla**. "Skye is one of the most picturesque islands of the Hebrides, with serrated ridges, streets of lava, cup-shaped caldrons, silvery cataracts, mountain-lakes, and spar caverns." The islets of **Iona** and **Staffa**, west of Mull, are famous—the former for its remains of Early Irish Christianity, the latter for its basaltic pillars and cavern (*Staffa*=*a* or *isle of staves*). The Outer Hebrides lie farther out, but still parallel with the coast; and the largest are **Lewis-and-Harris**; **North Uist** and **South Uist**.

(iv) The largest island in the Firth of Clyde is **Arran**. It is a mountainous island, and its highest summit is **Goat Fell**—the highest peak in South Scotland. To the North of Arran lies **Bute**, separated from the mainland by the lovely and winding arm of the sea called the **Kyles of Bute**.

10. **Straits.**—Amid so many islands and peninsulas, with so many openings into the land, there must be many straits, channels, sounds, and sea-passages for ships. The most frequented channel is the **North Channel**, between Cantire and Ireland.

The others are: **Pentland Firth**, between the mainland and the Orkneys; the **Sound of Sleat**, between Skye and the mainland; the **Sound of Mull**, between Mull and Mor-

vern; the **Sound of Jura**; the **North Minch** and the **Little Minch**, between the Outer Hebrides and the mainland.

**11. The Build of Scotland.**—Scotland consists of a northern mountain-mass, a lowland plain, and a southern region of uplands. The highest ranges lie, as in England, in the west of the country; but the general direction of these ranges is at right angles to the Pennine Range, or from west to east.

(i) The northern mountain-mass, or **Highlands**, lie between the Pentland Firth and the Lowland Plain.

(ii) The **Lowland Plain** merely fills the isthmus which connects the mountain-systems of the north with the hills of the south; and it varies in breadth from 30 to 60 miles.

(iii) The **Southern Uplands** lie between the Lowland Plain and the Cheviot Hills.

**12. The Mountains.**—A line drawn from Stonehaven (in Kincardineshire) to the Mull of Cantire, would form the southern boundary of the Scottish Highlands; but the whole mountain-mass is cleft in two by the long, deep, and narrow fissure of **Glenmore**, which runs from Loch Eil to Inverness. The mountain-regions north of the Tay may be divided into two systems: the **Northern System** and the **Central System**. The **Southern Uplands** lie south of the Firth of Forth.

(i) The **Northern System** includes all the mountain-ranges north of Glenmore. The highest summit is **Maam-Suil** (3862 ft.).

(ii) The **Central System** contains a large number of ranges, generally running east and west; and the most widely known range is the **Grampians**. The highest mountain is **Ben Nevis** (4406 ft.), which is also the highest summit in the three kingdoms; and the second highest is **Ben Macdhui** (4296 ft.). Other high peaks are **Cairntoul**, **Ben More** (= Great Ben); and, coming down to the south-west of Perthshire, we find **Ben Ledi** (= Hill of God), and **Ben Lomond**, on the edge of the picturesque district called the **Trossachs**.

“Craggs, knolls, and mounds confusedly hurl’d,  
The fragments of an earlier world.”

South of the Grampians are the lower ranges of the **Sidlaws** and the **Ochils**.

(iii) The **Southern Uplands** contain a number of low ranges, the best known of which are the **Moffat Hills**, the **Lowthers**, the **Moorfoots**, and the **Lammermoors**. The highest peak in the whole system is **Mount Merrick** (2764 ft.).

(iv) There is a continuous belt of high ground between Cape Wrath and Loch Lomond. This forms the great “wind-and-water-parting” of the country. In old days it had the name of **Drumalbyn**, or the Backbone of Albyn (= Scotland).

**13. Plains.**—There is properly only one plain in the whole of Scotland—the **Lowland Plain**, which lies between the Grampians and the Southern Uplands. The most clearly marked section of this plain is **Strathmore** (=the Great Valley), which lies between the Grampians on the north, and the Ochils and Sidlaws on the south. There are also many minor low plains along the coast.

(i) The best known of the minor plains are: the **Plain of Caithness**; the **Plain of Cromarty** (along the Cromarty Firth); and the **Plain of the Forth-and-Clyde**.

The great Roman wall of Antoninus ran through this plain. It was erected to keep out the barbarians of the North. "This region, formerly of such strategic importance, has, owing to its vicinity to two seas, its small elevation, and the riches of its soil and sub-soil, become one of the most prosperous of Great Britain, and, indeed, of the whole world. Edinburgh and Glasgow are the two sentinels of this Scotch isthmus. It was the action of the ancient glaciers which destroyed the more solid rocks, and spread their waste over the plain, thus creating the most fertile soil to be met with in all Britain."—RECLUS.

(ii) The most level part of the Lowland Plain is the **Carse of Stirling**, which is the alluvial plain of the lower Forth. It is as level as a bowling-green.

**14. Rivers.**—The watershed of Scotland being near the west coast, the rivers of the eastern slope are much the longest. The most famous are the **Tweed, Forth, Tay, Dee, Spey**, and **Ness**. The largest on the western slope are the **Clyde** and **Ayr**.

(i) The **Tweed** is the boundary river of Scotland. It is famous for salmon.

(ii) The **Forth** is a short river; but its estuary (which begins at Alloa) makes it the second greatest commercial river of Scotland. Both sides of the estuary have large numbers of ports, the most famous of which is **Leith**.

(iii) The **Tay** is the largest river in Scotland, and the longest (105 m.). It is famous for its salmon. It is navigable to Perth; but by far the greatest port on its banks is **Dundee**.

(iv) The **Dee** has a higher source than any other river in Great Britain. It rises on a flank of Cairngorm. In its upper valley stands **Balmoral**. At its mouth stands **Aberdeen** (=Deemouth), between the Dee and the Don.

(v) The "thundering **Spey**" is the most rapid of **Scottish** rivers.

(vi) The **Ness** is the outflow of Loch Ness. **Inverness** (=Nessmouth) stands at the mouth of it.

(vii) The **Clyde** is the first commercial river of Scotland, and takes rank with the Mersey and the Thames. Its lower basin "forms one vast town of mining works, and factories for iron, silk, wool, and cotton." Between Glasgow and Greenock it is the greatest shipbuilding river in the world.

**15. Lakes.**—The lakes of Scotland are renowned for their picturesque beauty. Most of them lie in mountain-valleys, and are there-

fore of a long and narrow shape. The three largest are : **Loch Lomond** ; **Loch Awe** ; and **Loch Ness**. Other famous lakes are **Loch Tay** ; **Loch Maree** ; and **Loch Katrine** ; and, in the lowlands, **Loch Leven**.

(i) **Loch Lomond** is the largest lake (45 square miles) in Great Britain. It has "the form of a thin wedge driven up into the heart of the mountain-masses."

(ii) **Loch Maree** is surrounded by high and rugged mountain-walls.

(iii) **Loch Katrine** lies in the Trossachs, looking, in the evening light, "one burnished sheet of living gold." It is the scene of Walter Scott's "Lady of the Lake."

**16. Climate.**—The climate of Scotland is colder and damper than that of England. It has a long winter ("winter lingering chills the lap of May") and a cold summer. The west coast and the mountain districts are much rainier than the east coast and the regions of the Lowlands ; and the long coast-line gives openings for the warm and moist sea-breezes. But, in winter, much of Scotland is warmer than even the south of England.

(i) In winter the mean temperature of the Orkney Islands is about the same as that of London ; and the "isotherms follow the meridians."

(ii) "January is a far colder month on the Thames than in the Hebrides."

(iii) The rainfall on the west coast is in many places double that on the east.

**17. Vegetation.**—Scotland is the land of the pine and heather ; though, in the lowlands, oaks, beeches, and elms grow well. The hardier grains—**oats** and **barley**—are characteristic of Scotland ; but good crops of wheat are also raised in the richer alluvial soils. A very large part of the country is permanently under grass.

**18. Minerals.**—Scotland is very rich in **coal**, and has some **iron**. Coal is found in large quantities within the great quadrangle which lies between Dundee and St. Abb's Head on the east, and Dumbarton and Girvan on the west. The richest coal-fields lie in the Plain of the Forth and Clyde. **Oil-shale** is found in Linlithgowshire.

(i) The annual output of coal in Scotland amounts to about 32,000,000 tons. Of this Glasgow exports every year about 1,200,000 tons.

(ii) Excellent **freestone** for building abounds in the south of Scotland. Aberdeen has a great deal of **granite**, which is also found in Arran, etc.

(iii) It is the Lowland Plain which contains the chief mineral wealth. Hence, and owing also to the fact that railway-communications are easy over its flat surface, it has become the great seat of Scottish industrial life.

19. **Population and Populousness.**—The population of Scotland amounted in 1911 to 4,759,000. This gives about 160 persons to the square mile. By far the larger part of the population is crowded into the Lowland Plain, especially into the coal and iron centres.

(i) England is nearly four times as populous as Scotland.

(ii) The population of Scotland has an increasing tendency, as in England, to crowd into towns. As London contains nearly one-fifth of the population of England, so Glasgow contains nearly one-sixth of the population of Scotland.

(iii) There are two well-marked races in Scotland—the **Teutonic** and the **Celtic**. The Lowlanders are mostly Teutons, and, on the east coast, of the Scandinavian branch,—with a strong dash of Celtic blood; while the Highlanders are, in general, pure Celts. The Highlanders speak **Gaelic**, which is a relation of Erse, Manx, and Brézouec.

20. **Industries.**—**Mining, manufactures, and commerce** are now the chief industries of the country; though the ancient industry has always been, as in other lands, **agriculture**.

(i) The Highlands are mostly given up to pasture; the Lowlands produce excellent cereals of all kinds, but chiefly barley and oats.

(ii) The manufacturing districts lie mostly in the neighbourhood of Glasgow.

21. **Manufactures.**—The chief textile manufactures of Scotland are those of **cottons, woollens, linen, jute, and silk**. Scotland possesses nearly 750 textile factories, which give employment to more than 150,000 persons. All kinds of **machinery and hardware** are made. **Shipbuilding** is also an important industry; and there is also a very large production of **paper**.

(i) The **cotton** manufacture is carried on chiefly in Glasgow and Paisley. Paisley makes immense quantities of thread.

(ii) The **woollen** manufacture goes on in Galashiels and Hawick (in the Tweed Valley); in Stirling, Kilmarnock, Bannockburn, etc.

(iii) **Linen and jute** manufacturing have their centres in Dundee and other towns of Forfar; in Dunfermline and other towns of Fife.

(a) "In 1840 the importation of JUTE from India direct to Dundee was 139 tons. In 1890 the importation of jute, in more than 80 vessels, amounted to over 230,000 tons."

(b) There are many jute mills now in Calcutta; and they compel Dundee to keep up a keen competition.

(c) "JUTE was not known in Great Britain till it was manufactured in DUNDEE; and Dundee is still the seat of the jute trade."

(iv) **Silk** is woven in Glasgow and Paisley.



(v) The **shipbuilding** of the country has its chief seat on the Clyde—where the largest Atlantic and Pacific steamers, and the most immense iron-clads, are built. The Clyde alone does about 80 per cent. of all the shipbuilding in the United Kingdom. It has everything the industry requires—coal and iron easily accessible, timber procurable from America which it faces, a good river for launching and for trial trips, and abundant supplies of labour.

(vi) **Paper-making** is a specialty of Scotland. Midlothian and Aberdeenshire are the chief centres. Along with this goes the industry of **printing**; and Edinburgh is the greatest centre of printing in the United Kingdom.

**22. Commerce.**—The commerce of Scotland is a steadily growing quantity. There is not a port in the world where her ships are not known. Her chief ports are : **Glasgow, Aberdeen, Leith, Dundee, Greenock, Grangemouth, and Kirkcaldy.**

(i) **Glasgow**, besides being the great manufacturing capital of Scotland, is also the commercial capital. Her annual tonnage ranks after that of Hull, and Glasgow is therefore the sixth port in the United Kingdom. Vessels of over 10,000 tons burden can reach the heart of the city. **Greenock** is her sister port. Both of these ports have a large trade with the two Americas.

(ii) The eastern ports have a large Baltic trade, and send ships also to other parts of Europe, and the East.

**23. Communications.**—Scotland has 4000 miles of excellent road ; more than 3800 miles of railway ; and over 150 miles of canal. There is probably no country in the world so well provided with the means of internal communication.

(i) Even in the most thinly inhabited parts of the Highlands there are good roads.

(ii) The network of railways is densest in the coal and iron district; and especially in the Forth and Clyde Basin.

SCOTLAND has spent nearly £190,000,000 in constructing its railways.

(iii) The longest canal is the Caledonian Canal ; but it is of slight use for shipping, as it lies quite out of the main track of commerce.

(iv) The greatest bridge is the **Forth Bridge** of the North British Railway. It is 1 mile 1005 yards long, and 450 feet high—the longest and tallest bridge in the world.

**24. Religion and Education.**—The most widely spread form of religion is **Presbyterianism** ; but all creeds, sects, and religions have complete freedom. The Lowland Scotch have always highly valued and ardently promoted education ; and there are at present good schools in every part of the country.

There are four Universities : **Edinburgh, Glasgow, Aberdeen, and St. Andrews.** There are excellent secondary schools in every large town.

## THE COUNTIES OF SCOTLAND

## THE COUNTIES OF THE SOUTHERN UPLANDS

1. **Wigtown.**—Wigtownshire is the most southerly county in Scotland. It contains the extremities of the southern uplands. It is a pastoral county. The largest town is **Stranraer**; the county town is **Wigtown**.

(i) **Wigtown**, a small country town, stands on Wigtown Bay.

(ii) **Stranraer** is a flourishing seaport on Loch Ryan. It has a considerable trade with Belfast and the North of Ireland. It has a good Grammar School.—**Port-Patrick** is only 22 miles from Donaghadee, a port on the east coast of Ireland. It is therefore the nearest town to Ireland in Great Britain.

2. **Kirkcudbright.**—This county contains the wildest parts of the Southern Uplands. The highest point is Merrick (2764 ft.). The county town is **Kirkcudbright**, on the Dee.

Kirkcudbright (pronounced *Kirkcoobry*) is a contraction of "Kirk of St. Cuthbert."—Wigtown and Kirkcudbright have the common name of "Galloway."

3. **Dumfries.**—This county has an upland pastoral region in the north; and, in the south, a broad agricultural region, which consists of two fertile valleys—Nithsdale and Annandale. The largest town is **Dumfries**, which is also the county town.

**Dumfries**, a market for agricultural produce, is also a seaport on the Nith. The manufacture of tweeds and hosiery is the leading industry.—Robert Burns died and is buried here.

4. **Roxburgh.**—Roxburgh is a lovely pastoral and agricultural county, which consists of the Valley of the Teviot, and part of the basin of the Tweed. It extends to the Cheviot Hills. The largest town is **Hawick**; the county town is **Jedburgh**.

(i) **Hawick** (17) is a thriving town which manufactures tweeds, yarn, and hosiery. Dye-works and tanneries are also prosperous.

(ii) **Jedburgh**, on the Jed, was famous for a kind of justice called "Jethart Justice," which consisted in hanging a man first and trying him afterwards. It has a fine old abbey church.—**Kelso**, on the Tweed, has the ruins of a noble abbey.—**Melrose** has another ruined, though still lovely, abbey, celebrated by Sir Walter Scott in his "Lay of the Last Minstrel." Abbotsford, the house of Walter Scott—"a poem in stone"—built by himself, stands also on the Tweed, not far from Melrose.

5. **Ayrshire.**—Ayrshire is a large and wealthy county on the Firth of Clyde. Its wealth consists in four things : excellent pasturage (it is called the “Dairy County”), fertile corn-lands, a large coal-field, and thriving manufactures. The largest town is **Kilmarnock** ; the county town is **Ayr**.

(i) **Kilmarnock** (34) has large ironworks, engineering establishments, carpet and woollen manufactures. It also produces carpets, shawls, boots, etc.

(ii) **Ayr** (32), at the mouth of the river Ayr, is a busy port which exports much coal and iron ; and is also a manufacturing town. The tonnage of vessels entering and leaving the port has trebled itself within the last ten years. The great Scottish poet, Robert Burns, was born here in 1759.

(iii) **Troon** is the shipping port of Ayrshire.

6. **Renfrewshire.**—This county consists chiefly of a broad plain, which lies between the Clyde and the Firth of Clyde. The lower lands abound in coal and ironstone. Mining, manufactures, and ship-building are the chief industries. The two largest towns are **Greenock** and **Paisley** ; the county town is **Renfrew**.

(i) **Greenock** (75) is a seaport at the mouth of the Clyde with a large foreign trade. This town, like Glasgow and like Liverpool, owes its rise in importance to the development of the American trade, and to what it imports from America—notably sugar and tobacco. It also manufactures steam-engines, anchors, and other articles connected with shipping. In addition to its large port and docks, **Greenock** has sugar refineries, shipbuilding yards, cotton and woollen factories, ironworks, etc. Its position is the most picturesque of any seaport in Scotland ; as it commands the vast expanse of the estuary of the Clyde, beautiful arms of the sea, such as Holy Loch, Loch Long, etc. ; and the crowds of steamers, ships, yachts, and boats that go up and down make the scene always lively and gay. Nearly one hundred steamers touch at Greenock every day. “The Tail of the Bank,” in front of Greenock, is the best anchorage in the Firth of Clyde. James Watt was born in Greenock in 1736.

From the heights above the town, the view of mountain, sea, lake, and highlands is wonderfully fine. Ben Lomond, Ailsa Craig, Goatfell (in Arran) can be seen.

(ii) **Port-Glasgow** has large shipbuilding yards. It was intended to be the port of Glasgow ; but the deepening of the Clyde deprived it of its trade. The Clyde Trust has spent over £11,000,000 sterling on this deepening.

(iii) **Paisley** (84), one of the rainiest places in Great Britain, manufactures thread, cotton cloths, and shawls. For about 150 years Paisley was celebrated for coarse linen, for shawls (made in imitation of Indian shawls) ; for silk gauze, etc. ; but these industries have now declined ; and the staple of the town is **thread**, of the manufacture of which it is the capital.

7. **Lanark.**—Lanarkshire consists chiefly of Clydesdale, or the basin of the Clyde. It is the wealthiest and most populous county in

Scotland. In the south or upper part of the county agriculture and sheep-rearing are the chief industries ; in the north or lower, mining and manufactures. **Glasgow** is the largest town.

(i) **GLASGOW** (784), on the Clyde, is by far the largest city in, the industrial metropolis of, Scotland, and the second largest city in the United Kingdom. It stands in three counties,—Lanark, Renfrew, and Dumbarton. It is a great port, a vast manufacturing town—in cotton, iron, and other materials—and a centre of commerce of every kind. It stands on the great Clyde coal-field, and has overflowing supplies of coal and iron. In the West End are noble streets, and the fine buildings of the University. A little to the south is **Largside**, where Mary Queen of Scots fought her last battle in 1568.

(a) In 1801, the population of **GLASGOW** was only 77,000. It is now over ten times as large.

(b) Its supply of water is much the best and the largest of any city in Great Britain. It brings its water from Loch Katrine—34 miles away ; and it pours into the houses of the city a supply of 40,000,000 gallons every day.

(ii) The chief factors in the enormous growth and immense prosperity of Glasgow are the following : (a) The existence of the river **Clyde**. By the expenditure on this river of £11,000,000, the Clyde Navigation Trust have made in it a channel capable of allowing ships that draw 26 ft. of water to come up to Glasgow. (b) The immense genius, talent, perseverance and industry that have founded so many great **shipbuilding yards**. It was Glasgow that launched (in 1812) the **COMET**—the earliest trading steamship in the Old World ; and from that day it has gone on improving, until it has produced ships like those of the famous **CUNARD** line, ocean grey-hounds, which cross the Atlantic in 4 days. (c) The fact that Glasgow stands on a large **coal-field** which is also very rich in seams of **ironstone**. The invention of Neilson's hot-blast for iron furnaces in 1828 gave Glasgow a start which enabled it for a long time to distance all competition. (d) The importance of its **textile manufactures**, and of the industries connected with it. Among the latter are the dyeing of **Turkey-red**, in which Glasgow is quite unequalled ; the invention of **bleaching-powder** (which was the foundation of the St. Rollox Chemical Works) and other chemical products useful in manufactures. (e) Last, and not least, is the combination of steady thinking with straightforwardness for which the great manufacturers and merchants of Glasgow are justly known.

(a) "**GLASGOW** yields to Liverpool only in its shipping ; approaches Manchester in its cotton spinning ; Newcastle in its coal ; exceeds the Thames and the Tyne in its iron shipbuilding ; and equals Merthyr Tydvil and Wolverhampton with its iron furnaces ; while the industry and perseverance of its inhabitants has converted the shallow Clyde into a broad and deep dock for a navy of the largest merchant ships, lined with nearly six miles of quay, created at a total cost of about £8,000,000 sterling. In addition to all this, it was the birthplace of the steam-engine, James Watt's invention having been perfected here."

(b) "**GLASGOW** has an enormous supply of the purest and softest water in Europe. This is drawn from the lovely mountain-girt Loch Katrine, which is about 40 miles distant. Tunnels and aqueducts and iron tubes go through mountains, down through valleys, over rivers and railways, and so on to the populous city. About 40,000,000 gallons are poured daily into the houses of the great western capital."

(c) **GLASGOW CATHEDRAL** possesses a larger variety of stained glass than any other building in the United Kingdom. Most of the glass came from Munich.

(d) In 1735, the whole shipping of Scotland was only one-fortieth part that of England ; it is now, thanks to the energy of **GLASGOW**, about one-fifth.

- (e) The chimney in Port-Dundas Chemical Manure Works is 454 feet high and 50 feet in diameter at the base. It is the third loftiest building in the world. The two higher are the spire of Strasburg Cathedral, and the Great Pyramid.

(iii) The mining districts are crowded with manufacturing centres, such as: **Hamilton**, **Airdrie** (with collieries and cotton-works), **Coatbridge** ("the centre of a group of blazing iron-furnaces"), **Wishaw** ("a town undermined by coal pits"), **Motherwell** (a town of modern rise and sudden prosperity from the mineral wealth under it), etc.

This district is the **BLACK COUNTRY** of Scotland. A desolate, black district of coal-heaps and blazing furnaces,—smoke, ashes, and cinders,—grassless, treeless, sunless,—every green thing choked beneath rubbish heaps,—such is the view spread before the eye of the traveller. "Yet it is the climax of human industry."

- (iv) **Lanark**, the county town, stands near the picturesque Falls of Clyde.

8. **Peeblesshire**.—Peeblesshire is a hilly county among the southern uplands, on the upper waters of the Tweed. The northern part touches the Midlothian coal-field. Most of the county is purely pastoral. **Peebles** is the county town.

9. **Selkirkshire**.—This is a pretty pastoral and hilly region, lying among the southern uplands. It consists of the two valleys of the **Ettrick** and **Yarrow**. **Ettrick Pen** (2170 ft.) is the highest point in the county. **Galashiels** is the largest; **Selkirk** is the county town.

(i) **Galashiels** (=the *shields* or houses on the Gala) is the chief seat in Scotland of the famous Scottish "tweed" and tartans manufacture. A hundred years ago, the value of the cloth manufactured here was £1000 a year; it is now over £1,250,000 a year. **Galashiels** has also the largest and best fitted tannery in Scotland. It is a rapidly rising place.

(ii) **Selkirk**, the county town, stands on the **Ettrick**. **James Hogg**, the "Ettrick Shepherd," a famous Scottish poet, was born in the Forest of **Ettrick** in 1770.

10. **Berwickshire**.—This county lies between the **Lammermoor Hills** and the **Tweed**. The wide fertile plain in the middle is called the **Merse**. The county town is **Greenlaw**, a mere village.

*Berwick* is = *Aberwick*—the *wick* or creek or bay at the *aber* or mouth of the **Tweed**.—*Lammermoor* is = Moor of Lambs.

**Dryburgh Abbey**, a beautiful ruin on the **Tweed**, holds the tomb of **Sir Walter Scott**.

11. **Linlithgow**.—**Linlithgowshire**, or **West Lothian**, is a region of craggy hills, with low ground on the **Firth of Forth**. In the west is a coal-field; in the east an oil-shale district. **Bo'ness** is the largest town; **Linlithgow** is the county town.

(i) **Bo'ness** (**Borrowstounness**) is a coal-port on the **Forth**.

(ii) **Linlithgow**, on a lake, has the remains of a large palace, in which **Mary Queen of Scots** was born in 1542.

**12. Edinburghshire.**—This county, which is also called **Midlothian**, is the largest and most important of the three Lothians. In the south are the Pentland Hills and the Moorfoot Hills; in the north, a fertile plain along the Forth. In the east is the Midlothian Coal-field; in the west, the oil-shale district. **Edinburgh** is the largest and the county town; **Leith** is the chief seaport.

Edinburgh=Edwin's Burgh or stronghold. Edwin was a Saxon Prince, who first fortified the Castle Rock.

(i) **EDINBURGH** (320), on some steep slopes and ridges which rise from the Firth of Forth towards the Pentlands, is one of the most beautiful cities in the world. The **Old Town** is built on a narrow ridge which is a continuation of the Castle Rock. The **New Town** stands on a steep slope which runs down to the Forth. Edinburgh is the seat of the **Law Courts** of Scotland; and of the largest University in the country.

(a) "No one will deny to Edinburgh the praise of extreme natural beauty of situation. In this she is surpassed, perhaps, by only two cities in Europe—Athens and Constantinople. The grandeur of the black rocky pedestal on which the castle stands, the majestic bulk and picturesque outline of Arthur's Seat and Salisbury Crags, and other hills which overlook it from the south, and the lovely blue of the Firth of Forth, backed by the hills of Fife, are features of romantic beauty hardly to be surpassed. Its appellation of 'The Modern Athens' is based upon facts."—MURRAY.

(b) "The city is all built of stone, upon a series of hilly ridges, running parallel like waves, with hollows between, also occupied by streets, and occasionally crossed by high-level bridges."

(c) It is full of good schools and colleges; it is the greatest seat of printing in Great Britain; possesses one of the greatest Schools of Medicine in the world; and has a large number of varied minor industries.

(ii) **Edinburgh** is also a great centre of brewing, printing, and paper-making. It brews about three-fourths of all the beer produced in Scotland. The printing-office of the **CONSTABLES**, and the paper-factory of the **COWANS** are famous all over the world.

(iii) **Leith** (80), the seventh largest town in Scotland, is practically one town with Edinburgh. It is the second seaport in Scotland. It has large docks, and two piers each a mile long. It has a growing trade in corn and timber with London, the Baltic, North Germany, and New York; in wine from France and Spain; and in esparto-grass from Oran and Algeria. Its foreign, colonial, and coaling-trade is great and increasing yearly. Its imports—of corn, chemicals, sugar, etc.—have an annual value of over £8,000,000; its exports—coal, iron, cotton goods, etc.—amount to £3,000,000 a year. There are also large flour-mills, sugar-refineries, breweries, engineering-works, chemical-works, etc. Leith has also large manufactures of cordage, sail-cloth, machinery, soap and oilcake. It possesses two of the largest flour-mills in the country,—in one of which "99 pairs of stones work under one roof."

**13. Haddingtonshire.**—Haddington (or East Lothian) consists of hills and moorlands in the south, and fertile lowlands on the Firth of Forth. The county town is **Haddington**.

(i) **Haddington**, a small country town, was the birthplace of John Knox.

(ii) **Dunbar**, a small seaport, is memorable for the victory of Cromwell over the Scottish army in 1650.—At **Prestonpans**, near Edinburgh, Sir John Cope, in command of the Royalist forces, was defeated by Prince Charles in 1745.



## THE LOWLAND COUNTIES OF THE NORTH

14. **Dumbartonshire.**—This county is a long strip of land between Stirlingshire and Argyllshire, and most of it between Loch Lomond and Loch Long. In the south-eastern part there is much coal. The largest town is **Clydebank** (37); **Dumbarton** is the county town.

*Dumbarton*—the *dun* or fortified hill of the *Britons*. The town was the capital of the ancient British kingdom of Strathclyde. *Cf.* *Dunkeld*, the fortified hill of the *Celts*.

(i) **Dumbarton** (15), “nestling under the shadow of its two-peaked rock” at the junction of the Leven and the Clyde, is a busy port, with large shipbuilding yards. —The Vale of Leven has a large trade in bleaching, dyeing, and calico-printing. —**Clydebank** has large shipbuilding and sewing-machine works.

In 1658 the Magistrates of GLASGOW were anxious to make DUMBARTON their harbour. The offer was declined on the important ground that, “the influx of mariners would tend to raise the price of butter and eggs to the inhabitants.”

(ii) **Kirkintilloch**, which stands in a detached portion of the county between Stirlingshire and Lanarkshire, has mines of coal and ironstone.

15. **Stirlingshire.**—This county is mountainous in the north-west, hilly in the middle, more level and fertile towards the south-east. The flat alluvial plain between Stirling and Alloa is called the “Carse of Stirling,” and is one of the richest parts of Scotland. Part of the Western Coal-field lies in this county. The two largest towns are **Stirling** and **Falkirk**; the former is the county town.

(i) **Stirling** (21), with its castle, which commands the entrance into the Lowlands, is one of the most historic towns in Scotland. It was frequently the residence of the Scottish kings. Not far from the town is **Bannockburn**, the scene of the defeat of Edward II. by Robert Bruce in 1314.

(a) “STIRLING stands nobly on rising ground, overlooking the river Forth, ‘that bridles the wild Highlander.’ The town is built on a slope of a hill, whose top, 340 feet above the level of the sea, descends on the north-west side in a black precipice, and is occupied by the CASTLE, resembling in this respect the situation of Edinburgh, and, like it, commanding on a clear day one of the most lovely views in the kingdom.”

(b) “As the ‘grey bulwark of the North,’ the key of the main passage between the North and the South of Scotland, at no period of Scottish history can it be said that Stirling was not an object of the highest interest, and in no war was it not one of contention.”—MURRAY.

(ii) **Falkirk** (83) is a cattle-market, and an iron-working town. It stands on a large coal-field, and is surrounded by blazing ironworks and collieries.

16. **Clackmannanshire.**—This is the smallest county in Scotland. It lies between the Ochil Hills and the Forth; and the lower part is on a valuable coal-field. **Clackmannan**, a mere village, is the county town; the largest town is **Alloa**.

(i) The whole county contains only 47 square miles—about one-third of Rutland.

(ii) **Alloa**, on the Forth, is a small shipping-port for coal and iron. It has also numerous manufactories of woollen tartans, breweries, etc.

17. **Kinross-shire.**—This is a small pastoral and agricultural county between Perthshire and Fife. **Kinross** is the county town.

**Kinross** stands on the western shore of Loch Leven. Loch Leven Castle, on an island in the Lake, was the prison from which Mary Queen of Scots escaped in 1568, to fight the battle of Langside.

18. **Fife.**—Fifeshire is a lowland county with high hills in the west, a broken and hilly surface almost throughout, with a fertile valley called the “How of Fife,” which is drained by the Eden. In the south-west there is a large and valuable coal-field. The county lies between the Firth of Forth and the Firth of Tay. Its manufacturing towns, its residence towns, and its girdle of towns and ports round the coast, make it a kind of “Scottish Kent.” The county town is **Cupar**; the largest town is **Kirkcaldy**.

James VI. compared Fife to a “beggar’s mantle fringed with gold.”

(i) **Cupar** (4) is a very quiet little country town.—Not far from it is **St. Andrews**, the ancient ecclesiastical capital of Scotland, and the seat of her oldest University.

(ii) **Kirkcaldy** (40), “the lang toun,” stretching three miles along the shore, is a busy seaport, and a market for coals and corn. It is also the chief seat of the manufacture of oil-cloth and linoleum. It was the birthplace of Adam Smith; and Thomas Carlyle was a teacher there for some time.

(iii) **Dunfermline**, in the south-west, stands in the middle of the coal-field, and manufactures table-linen. The industry centres here because of the flax which used to be grown in Fife, but is now imported from Russia.

19. **Forfar.**—Forfarshire (or Angus) consists of four parallel belts of country; the “Braes of Angus” in the north; the fertile Valley of Strathmore; the chain of the Sidlaw Hills; and the lowland strip between them and the coast. This county is the chief seat of the linen and jute manufacture; and it is one of the busiest counties in Scotland. **Dundee** is by far the largest town; the county town is **Forfar**.

*Strathmore* = the great strath (or river-valley).

(i) **Dundee** (165), on the Firth of Tay, is the third largest city in Scotland. It is the chief seat of the jute manufacture and also a great seaport, from which ships go out to the whale and seal fisheries. Dundee also possesses linen manufactures, ship-building, rope-making, carpet-making, sugar-refineries, etc.

(ii) **Montrose** and **Arbroath** (or Aberbrothock=Mouth of the Brothock) are both thriving manufacturing towns and seaports. Off Arbroath is the Bell Rock Light-house, which is built on the “Inchcape Rock.” Montrose carries on a good deal of shipbuilding, rope and sail-making. Arbroath has large factories of coarse linen and canvas.

20. **Kincardineshire.**—Kincardine lies between Forfarshire and the river Dee. Agriculture and fishing are the chief industries. The county town is **Stonehaven**, an important herring-fishing station.

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## THE COUNTIES OF THE SOUTHERN HIGHLANDS

21. **Argyllshire.**—Argyll is a county of mountains, moors, islands, sounds, lochs, and other deeply penetrating arms of the sea. The great inlet of Loch Linnhé cuts the county in two. The highest mountains are **Ben Lui** (3708 ft.) and **Ben Cruachan** (3611 ft.). The two largest towns are **Oban** and **Campbeltown**; the county town is **Inveraray**. The Mull of Cantire has been cut by the **Crinan Canal**.

(i) **Oban** (6), the terminus of the Caledonian Railway, is the capital of the West Highlands. **Campbeltown** (7), the largest town, in the south of Cantire, has large whisky distilleries.

(ii) **Inveraray** (=Mouth of the Aray) stands at the head of Loch Fyne.

(iii) **Glencoe**, the scene of the treacherous massacre of the Macdonalds in 1692, lies in the north-east of this county.

22. **Bute.**—Buteshire consists of the islands of Arran and Bute, with some others in the Firth of Clyde. Arran is mountainous; Bute is hilly in the north, level and fertile in the south. The county town is **Rothsay** (a place frequented by people in search of health), on the island of Bute.

The long winding mountain-bordered channel between Bute and the mainland is called the "Kyles of Bute."

23. **Perthshire.**—Perthshire is the loveliest and most varied county in Scotland. It is a large irregular circle which holds the entire basin of the Tay, and part of the basin of the Forth. It is almost equally divided between highlands and lowlands—between mountain and plain. Everywhere Perthshire is beautiful; and the Perthshire Highlands, in the west and south-west, contain some of the grandest and most picturesque scenery in the country. "The Trossachs" have been described by Sir Walter Scott in the "Lady of the Lake." Above Loch Tay, the largest lake, towers **Ben Lawers**

(3984 ft.), the loftiest mountain of Perthshire. Loch Katrine is the loveliest of many beautiful lakes. Part of the great hollow of Strathmore lies in this county; and also the very fertile "Carse of Gowrie." The largest town is **Perth**, which is also the county town.

(i) **Perth** (35) is a beautiful city on the right bank of the Tay. It has the largest dye-works in Europe. One of the chief industries of the city is net-fishing in the Tay for salmon. Near Perth is **Scone**, where the Kings of Scotland were crowned in ancient times.

(ii) **Dunblane** on the Allan, an affluent of the Forth, has a lovely cathedral. Not far from it is **Sheriffmuir**, where a battle was fought in the Rebellion of "the Fifteen" (1715). West of Dunblane is **Callander**, a pretty town at the entrance to the Trossachs.

(iii) The **Pass of Killiecrankie**, on the Garry, was the scene of the death (in 1689) of Claverhouse, Viscount Dundee, while fighting against the forces of William III.

## THE COUNTIES OF THE NORTHERN HIGHLANDS

24. **Inverness-shire**.—Inverness-shire is the largest of all the Scottish counties. It is a land of lofty mountains, rugged and craggy hills and bare high moorlands—a land inhabited mostly by sheep, deer, grouse, and other game. The highest mountain—and it is the highest summit in the British Isles—is **Ben Nevis** (4406). The county is cut in two by the "cleft of the Great Glen (Glenmore)"—the longest, straightest, and deepest in Great Britain. The lakes in this Glen are connected by the Caledonian Canal, which gives a passage for ships from the Atlantic into the Moray Firth. To this county also belong the islands of Skye (the largest of the Inner Hebrides), Harris, North Uist, etc. The largest town is **Inverness**, which is also the county town; the chief town of Skye is **Portree**.

The Hebrides were called by the Norsemen *Sudreyar* (=Southern Isles). Hence the title "Bishop of Sodor and Man." Hence also the name *Sutherland* for the most northerly county in Scotland.

(i) **Inverness** (20) is the capital of the Highlands. It stands at the mouth of the Ness. A little east is **Culloden Moor**, where Prince Charles was finally defeated in 1746.

(ii) **Portree** is a small fishing town.

25. **Nairn**.—This county consists of a hilly and moorland district in the south, with a low fertile plain on the Moray Firth. Agriculture and fishing are the chief pursuits. **Nairn** is the county town.

26. **Elgin.**—Elgin (or Moray) is in build similar to Nairn ; but the level plain on the sea-coast is more fertile. **Elgin** is the county town.

**Elgin** possesses the remains of a beautiful cathedral, “the most splendid ecclesiastical ruin in Scotland.”

27. **Banffshire.**—Banff is a long county, which, like Nairn and Elgin, has a strip of fertile land along the shore. The south is both hilly and mountainous. Fishing and agriculture are the industries. —The county town is **Banff**.

28. **Aberdeenshire.**—This county has also two different regions—a highland and a lowland. The highland and mountainous region is in the south-west ; the lowland is in the north and east. The chief valleys are those of the Dee and the Don. Farming, fishing, ship-building, and granite-working are the main industries. The largest town is **Aberdeen**, which is also the county town.

*Aberdeen = Mouth of the Dee.*

(i) **Aberdeen** (163) is the fourth city in Scotland, a considerable seaport, a manufacturing town, and a place of commerce. It possesses a University. It has also important and growing manufactures in paper, combs, linen, woollens, iron, granite-polishing, etc. It does some shipbuilding.

(ii) **Peterhead**, near Buchan Ness, was long famous for its Arctic whaling-fleet. It has now an important herring-fishery, and a great harbour of refuge for the fishing industry.

(iii) In the upper valley of the Dee, at the foot of **Braemar**, stands **Balmoral**, the Highland residence of the King.

29. **Ross-shire.**—Ross-shire is a rugged highland region, with good corn-land in the low districts on the Moray Firth. The county of **Cromarty** consists of fragments scattered up and down Ross-shire. **Lewis** (the northern part of the island of Lewis-and-Harris) belongs also to Ross-shire. **Dingwall** is the county town ; **Stornoway** (a fishing port) is the capital of Lewis.

30. **Sutherland.**—Sutherlandshire is a wild and rugged region, very mountainous in the west. Most of it is deer-forest and sheep farm ; and it is the most thinly peopled county in Scotland. The county town is **Dornoch**, a small fishing village.

*Sutherland* = Southern Land, and received its name from the Norsemen, to whom it was *south*. There are many Norse names in the county, such as **Helmsdale**, **Laxford** (=Salmon ford), etc.

31. **Caithness.**—Caithness is a wide, bare, treeless, sterile table-land, surrounded by a wall of steep rock going right down into the sea. Fishing is almost the only industry. The largest town is **Wick**.

Caithness also is full of Norse names. *Wick* means *creek*. *Thurso* = the *oe* or island of Thor, the Norse god of thunder.

(i) **Wick** is the capital of the herring-fishery.—**Thurso** is famous for its salmon.

(ii) “John o’ Groat’s House,” near Duncansby Head, is the most northerly building in Great Britain. Hence the phrase “From Land’s End to John o’ Groat’s.”

32. **Orkney and Shetland.**—The Orkney and Shetland Isles form one county. This archipelago consists of several hundreds of islands, islets, skerries, and rocks. There are a few stunted and wind-blasted trees; some thin oats and green crops. The chief industry is fishing. The inhabitants are descendants of the old Scandinavians. **Kirkwall** is the chief town in the Orkneys; **Lerwick** in the Shetlands.

The names in these islands are almost entirely Norse (Scandinavian). *A* or *o* or *oe* is = island. Thus *Sanda* = sand island; *Stromsøe* = the island in the stream or current.

(i) **Kirkwall** (3) stands on Pomona (or Mainland), the largest island in the Orkneys. It has a grim old Cathedral called after St. Magnus.

(ii) **Lerwick** (4), on Mainland—the largest island in the Shetlands—is a well-known harbour of refuge.





## IRELAND

1. **Introductory.**—Ireland is the third largest island in Europe (counting Iceland), and the pendant to the larger island of Great Britain. It forms a breakwater to the sister-island in several senses ; it prevents the billows of the Atlantic from striking part of the British shores, and it takes the first supply of rain from the Atlantic, so that the clouds which move on to Great Britain carry a smaller quantity of rain. It is separated from Great Britain by a sea much deeper than that which separates Great Britain from the Continent.

(i) The nearest point to Scotland is **Fair Head**. Between it and the Mull of Cantire, there is a distance of only  $13\frac{1}{2}$  miles.

(ii) Between **Carnsore Point**, in the south, and St. David's Head in Wales, there is a distance of 50 miles. In other words, St. George's Channel is nearly four times as broad as the North Channel.

(iii) The chief passenger communication between England and Ireland is from Holyhead to Kingstown, a distance of 66 miles.

## 2. Boundaries.—Ireland is bounded

1. **N. W. and S.**—By the **Atlantic Ocean**.

2. **E.**—By the **North Channel**, the **Irish Sea**, and **St. George's Channel**.

(i) The **Irish Sea** divides Ireland from England.

(ii) The **North Channel** divides it from Scotland.

(iii) **St. George's Channel** divides it from Wales.

3. **Size.**—The area of Ireland amounts to 32,583 square miles, or more than half that of England and Wales.

(i) The longest line that can be drawn within the island is from **Torr Head** in the north-east to **Mizen Head** in the south-west—a distance of 302 miles.

(ii) The greatest breadth is, from **Howth Head** to **Slyne Head**, 174 miles.

4. **Shape.**—The shape of Ireland is broader, shorter, and more compact than that of Great Britain. It is like “a lozenge set corner-wise in the ocean.” It is a rude parallelogram. The coast line is about 2000 miles long : and there are many excellent harbours, especially on the south and west coasts.

(i) The most northerly point of Ireland is **Malin Head**: the most easterly, the town of **Donaghadee**; the most southerly, **Mizen Head**, the most westerly, **Dunmore Head**.

(ii) The coast line gives 1 mile of coast to each 15 square miles of area. No part of the country is more than 50 miles from good navigation.

(iii) The harbours of **Bantry Bay** and **Cork** could hold the whole British navy.

**5. The North Coast.**—The northern coast of Ireland is high, rocky, wild, and rugged in character. It has two deep-drawn bays, and a few bold promontories.

(i) The two bays are **Lough Swilly** (=“Lake of Shadows”) and **Lough Foyle**.

(ii) The headlands are: **Horn Head**; **Malin Head**; **Bengore Head** (with the Giant's Causeway); and **Benmore** or **Fair Head**.

(iii) The Giant's Causeway is a “pavement formed of the tops of 40,000 columns of basalt.”

**6. The West Coast.**—The western coast is, like the northern, bold, wild, mountainous, and rugged. Three great mountain-masses project into the sea—those of **Donegal**, **Connaught** (**Mayo** and **Galway**), and **Kerry**; and between these are numerous bays and estuaries, the mouth of the **Shannon** being the most important.

(i) The chief openings and inlets on the west are: **Donegal Bay**; **Sligo Bay**; **Killala Bay**; **Clew Bay**; **Galway Bay**; the **Mouth of the Shannon**; **Dingle Bay**; **Kenmare River**; and **Bantry Bay**.

(ii) The most important headlands are: **Rossan Point**; **Erris Head**; **Achill Head**; **Slyne Head**; **Loop Head**; **Dunmore Head**; and **Crow Head**.

**7. The South Coast.**—The southern coast is lower than the western; and it possesses several magnificent openings.

(i) The chief openings are: **Cork Harbour**; **Kinsale Harbour**; and **Waterford Harbour**.

(ii) The chief capes are: **Mizen Head**; **Cape Clear**; **Hook Point**; and **Carnsore Point**.—“Cape Clear, the southern point of Clear Island, is a mere mass of barren cliffs.” It is the first land sighted coming from America.

**8. The East Coast.**—The eastern coast, like the southern, has a long regular line of low shore, which is interrupted by only two mountain-masses—those of the **Wicklow Mountains** and the **Mourne Mountains**. Some of its bays are closed by sandbanks.

(i) The chief openings are: **Wexford Harbour**; **Dublin Bay**; **Dundalk Bay**; **Carlingford Lough**; **Dundrum Bay**; **Strangford Lough**; and **Belfast Lough**. The best harbour among these is **Strangford Lough**.

*Lough* is a Celtic word (in Scotch Celtic, *Loch*) which is applied indifferently to a lake or to a deep-drawn arm of the sea.

(ii) The chief headlands are **Wicklow Head** and **Howth Head**.

"Almost all that Ireland possesses of picturesque beauty is to be found on or in the immediate neighbourhood of the sea-board, if we except some patches of riverscenery on the Nore and the Blackwater, and a part of Lough Erne. The dreary expanse called the Bog of Allen, which occupies the centre of the island, stretches away for miles—flat, sad-coloured, and monotonous, fissured in every direction by channels of dark-tinted water, in which the very fish take the same sad colour. This tract is almost without trace of habitation, save where, at distant intervals, utter destitution has raised a mud hovel undistinguishable from the hillocks and turf around it."

**9. Islands.**—The islands of Ireland are small in size, and are situated near the mainland. They are, in fact, parts of the mainland, the softer rocks between having been pared away by the action of water and weather. They are most numerous on the west coast, especially off Donegal, Mayo, and Galway.

(i) On the north coast we find **Rathlin Island** (which contains the same basaltic rocks as the Giant's Causeway) and **Tory Island**.

(ii) On the west coast: **North Aran**; **Achill**; **Clare**; **Aran Islands**; and **Valentia**. From Valentia starts the telegraphic cable to America.

(iii) On the south coast: **Clear**, and **Spike** (in Cork Harbour).

(iv) On the east coast: the small islands of **Dalkey** and **Ireland's Eye**.

The endings *ey*, *ay*, and the word *eye* are all the same. They are forms of the Scandinavian word for island—*œ*. The Celtic or Erse word for island is *Ennis*, *Innish*, or *Inch*. The ending *ford* in Wexford, Waterford, etc., is another witness to the presence of Norsemen on the east coast of Ireland. They were governed in Dublin by their own laws up to the 13th century.

**10. The Build of Ireland.**—Ireland is a wide limestone plain, interrupted by one low range (the Slieve-Bloom Hills), and surrounded by a broken belt of mountains and high lands. The belt of mountains is most continuous in the south and south-west. The central plain, which fills most of the country, and which consists of undulating ground, has an average height of 200 ft. above the sea-level, and is nowhere higher than 300 ft. The country has no backbone, and no geographical centre.

(i) Scotland has the Grampians as its backbone; England has the Pennine Chain; but the interior of Ireland is occupied by a vast watery plain, covered with lakes and badly drained by slow-flowing rivers.

(ii) Ireland is a much lower country than either England or Scotland. Its average height is 400 ft.; that of England 600 ft.; of Scotland 1000 ft.

(iii) In the Central Plain are numerous bogs, which altogether cover an area of 4420 square miles (more than twice the area of Norfolk), and which are among the most extensive in Europe. A dreary, sad, wide, deserted country—"where mud-cabins as black as the peat in the midst of which they rise are rare objects!"

**11. Mountain Systems.**—There are four clearly-marked systems of mountains—or rather of highlands, in Ireland; and these are the **Northern, Western, Southern, and Eastern Highlands.**

(i) The chief ranges in the North are: The **Mountains of Antrim** and the **Mountains of Donegal**. Between them lie the **Carntogher Mountains** in Londonderry. The highest point in the Mountains of Donegal is **Mount Errigal** (2462 ft.).

(ii) The chief ranges in the West are: The **Nephrin Beg Mountains** (in Mayo), which terminate in the bold cliffs of Achill Island; the **Connemara Mountains**, the western end of which clusters in the group of **Twelve Pins**; and the **Mountains of Kerry**, the highest range of which is the **Macgillicuddy<sup>1</sup> Reeks**, which culminate in **Carrantual** (3414 ft.).

(iii) In the South are: the **Knockmealdown Mountains**—north of the Blackwater Valley; and, parallel with them, the **Galtees**, the highest peak being **Galtymore**.—Still farther to the north are the **Silver Mines** and the **Slieve-Blooms**.

(iv) In the East are two granite mountain-masses: the **Wicklow Mountains** and the **Mourne Mountains**. The highest point in the former is **Lugnaquilla** (3039 ft.); in the latter **Slieve-Donard** (2796 ft.). The scenery of the Wicklow Mountains, with their lovely lakes, clear rivers, and noble waterfalls, is surpassed only by that of Killarney.

**12. The Plain of Ireland.**—The Great Central Plain of Ireland fills about four-fifths of the whole country. It is an “immense pasture-field,” lying between Dublin Bay and Galway Bay. Much of it is covered by bogs and morasses, the largest of which is the **Bog of Allen**; and the total extent of bog-land covers the huge area of 4,420 square miles—or about one-eighth of the whole area of the country. It is watered by one large river—the **Shannon**.

**13. Rivers.**—The rivers of Ireland rise in the heights which border the Central Plain, and fall into the sea on the same side of the island on which they rise. Hence they are short, unimportant, and of little use for commerce. To this general statement there is one striking exception—the **Shannon**, which flows through the centre of the Great Plain. The two next in size are the **Barrow** and the **Bann**.

(i) The **Shannon** (224 miles), the greatest river in the British Islands, rises in the mountains of Fermanagh and Leitrim: flows through Lough Allen, Lough Ree, and Lough Derg to Limerick, where it opens out into a wide and splendid estuary. It is navigable to Lough Allen—a distance of 213 miles. At a distance of 200 miles from the sea the Shannon is only 160 ft. above the sea-level; and hence it has only a fall of about 10 inches to the mile.

(ii) The **Barrow** (114 miles) rises in the Slieve-Bloom Mountains, flows past Athy (up to which town it is navigable), and falls into Waterford Harbour. By means of a branch of the Grand Canal, it connects Dublin and Waterford.

<sup>1</sup> Pronounced *Macklicuddy*.

(iii) The **Bann** (100 miles) flows out of Lough Neagh—the largest lake in the British Islands. It forms the boundary between Londonderry and Antrim.—Almost parallel with it is the **Foyle**, which flows into Lough Foyle.

(iv) The other well-known rivers are: (a) On the East: the **Boyne**, which flows through County Meath, and on which the “Battle of the Boyne” was fought in 1690; the **Liffey**, on which Dublin stands; the **Slaney**, which flows into Wexford Haven. (b) On the South: the **Suir** and **Nore**, which are tributaries of the Barrow; the **Blackwater**, which falls into Youghal Harbour; and the **Lee**, the estuary of which forms the noble harbour of Cork. (c) On the West: the **Moy**, which flows into Killala Bay; and the **Erne**, which is almost one long lake, and which flows into Donegal Bay.

(v) There are a good many rivers with the name *Blackwater*; and all the tributary streams might be divided into *black* and *white*. When a river has a long course through a bog, it carries with it large quantities of tannin, which gives it a deep brown colour; and under a cloudy sky this brown looks intensely black.

14. **Lakes**.—There are a great many lakes in Ireland, both in the mountainous and lowland districts. The Provinces of Ulster and Connaught abound with them; but Connaught has most. The largest is **Lough Neagh**, between Antrim and Tyrone; the most beautiful are the **Lakes of Killarney**, in County Kerry.

(i) **Lough Neagh** has an area of 153 square miles. It is three times as large as Loch Lomond, and fifteen times Lake Windermere.

(ii) Loughs **Erne**, **Conn**, **Mask**, and **Corrib** are singularly picturesque.

(iii) Loughs **Allen**, **Ree**, and **Derg** are expansions of the waters of the Shannon.

(iv) The **Lakes of Killarney** lie among the loveliest scenery in Ireland.

15. **Minerals**.—Ireland is poor in iron, and poor in coal. There are only four small coal-fields, the largest of which is the **Leinster Coal-field**, between the Nore and the Barrow. Peat is the fuel generally used; and coal has to be imported. Ireland's total output of minerals does not reach £250,000 a year. Many beautiful marbles are quarried in different parts of the island.

(i) “Of the Upper Carboniferous beds which at one time overspread the Central plain of Ireland, only small patches remain in isolated spots, serving chiefly as an indication of the immense loss that has been sustained in an important element of material prosperity.”—*ENCYC. BRIT.* xiii. 217.

(ii) This loss is believed to be due to the fact that, ages ago, Ireland lay beneath an immense glacier, which planed and scraped away the beds of coal.

16. **Climate**.—The climate of Ireland is moister, more equable, and warmer—latitude for latitude—than that of England. It is a maritime climate—a climate of the North Atlantic. No other

country in Europe is so abundantly supplied with rain. Hence the island keeps, both in winter and summer, a fresh and vivid green, which has given to it the appellation of the "Emerald Isle."

(i) The rainfall for the whole island averages 36 inches; for England it is only 30 inches. (As in the case of Great Britain, the west coast is rainier than the east.)

(ii) "Occasionally the downpour along the western coasts is so considerable that the sea, for a great distance from the land, becomes covered with a thick layer of fresh water."—FORBES.

(iii) The arbutus or strawberry-tree grows in the open air in the warm south-west of England, and among the Lakes of Killarney, just as it does in Madeira, Portugal, etc.

(iv) The rainfall at Cork is 40 inches a year: at Dublin only 31 inches. The high mountains on the west coast drive the rain-clouds into the higher (and colder) strata of air, where they are condensed, and discharge great quantities of rain.

**17. Vegetation.**—The climate is hurtful to cereal crops, and grass is the vegetable growth that is most successful. The most fertile part of the country is the tract in the Province of Munster known as the "Golden Vale," which stretches from Cashel in Tipperary to near Limerick, and occupies part of the valley of the Suir.

**18. Inhabitants.**—The majority of the people of Ireland belong to the Celtic Race. The admixture of Teutonic blood has been greatest in Ulster, where many of the inhabitants are of Scottish descent, and in Leinster, on the east coast, where many are of Norman and English descent.

(i) The "native" language is called **Erse**—a language akin to Gaelic in Scotland, Cymric in Wales, Maux in Man, and Brézonec in Brittany. It is spoken still by about 640,000 people.

(ii) "Even the poorest Irishmen, notwithstanding their abject condition, still retain excellent qualities. They love each other, assist one another in misfortune, and always keep the door of their cabin hospitably open. The least benefit conferred upon them lives ever after in their memory."—RECLUS.

**19. Population and Populousness.**—The population of Ireland numbered in 1911 only 4,381,951; and, since 1847, it has been steadily diminishing—chiefly by emigration. In 1841, the population was over eight millions. The most populous province is **Ulster**; the most thinly populated **Connaught**.

(i) Famine and emigration are the two chief causes of the diminution in the population of Ireland. In the great potato-famine of 1846-47, over a million persons died, either of famine or of the Typhus that followed it; and more than a million emigrated to the United States.



(ii) From 30,000 to 50,000 emigrate every year. In the ten years, ending 1900, 460,920 Irish emigrated. "In no other country has famine committed such ravages as on the fertile soil of Ireland; and no other country has poured forth so broad a stream of emigrants."

**20. Industries.**—The chief industry is the raising of **live-stock**. Cattle, pigs, and farm-produce constitute the chief industrial wealth. —In the north and east there are manufactures of **linens** and **woollens**.

(i) A large part of the country is bog or water; and only about two-thirds can be described as good land, fit for ploughing or for pasture.

(ii) The want of a sufficient supply of coal has depressed manufactures; and the water-power of the country has been little used.

**21. Commerce.**—The commerce of Ireland consists chiefly in the export of various kinds of agricultural produce, and in the import of coal, hardware, clothes, and other British manufactures. Her chief market for produce is Great Britain.

(i) The chief ports are **Dublin, Belfast, Cork, Waterford, Limerick, Galway, and Londonderry**. These are also her largest towns; and, from the nature of the interior, we should expect the largest towns of Ireland to lie on the sea-coast. The most flourishing sea-board is that which faces England (and Dublin lies right opposite Liverpool); though the west coast possesses splendid natural harbours.

(ii) Glasgow, Liverpool, and Bristol—all on the west coast of Great Britain, are the ports which receive most merchandise from Ireland.

(iii) Her exports amount to about £20,000,000 a year; and, of this, £19,000,000 worth comes to Great Britain.

(iv) Of the total trade of the United Kingdom England and Wales absorb about 90½ per cent.; Scotland's share amounts to about 8 per cent.; and Ireland takes only about 1½ per cent.

**22. Communications.**—There are good turnpike roads; there is ample water communication by river, lake, and canal; and there are about 3400 miles of railway.

(i) The chief canals are the **Royal Canal** and the **Grand Canal**. Both connect Dublin with the Shannon.

(ii) The chief railways are: (a) The **Great Southern and Western**, from Dublin to Cork (this is the route for the American mails, which land at Queenstown and go by train to Kingstown for Holyhead). (b) The **Midland Great-Western** from Dublin to Galway, right across the Central Plain. (c) The **Dublin, Wicklow, and Wexford**, with a branch from Wexford to Waterford. (d) The **Waterford and Limerick**—Waterford to Tuam. (e) The **Irish Great Northern**, from Dublin to Belfast. (f) The **Northern Counties**, from Belfast to Londonderry.

**23. Divisions.**—Ireland is divided into four provinces; and these are again subdivided into counties—of which there are 32 altogether.

The four provinces are : **Leinster**, in the east ; **Ulster**, in the north ; **Connaught**, in the west ; and **Munster**, in the south.

(i) These provinces correspond in some degree to the ancient kingdoms of Ireland, Before the English invasion, the country was divided into five kingdoms—Ulster, Connaught, Munster, Leinster, and Meath, the two last being afterwards joined.

(ii) **Leinster** contains 12 counties: Longford, West Meath, Meath, and Louth; King's County, Queen's County, Kildare, and Dublin; Kilkenny, Carlow, Wicklow, and Wexford.

(iii) **Ulster** contains 9 counties: Donegal, Londonderry, and Antrim; Tyrone, Armagh, and Down; Fermanagh, Monaghan, and Cavan.

(iv) **Connaught**, 5: Mayo, Sligo, and Leitrim; Galway and Roscommon.

(v) **Munster**, 6: Clare and Tipperary; Kerry and Limerick; Cork and Waterford.

**24. Large Towns.**—The presence of large towns in a country is, in general, due to the combination, in a high degree, of prosperous manufacture with busy commerce; but, in Ireland, this combination hardly exists. Hence there are only three towns in the whole country which have more than 50,000 inhabitants. These are **Dublin**, **Belfast**, and **Cork**. The three next to these in size are **Limerick**, **Londonderry**, and **Waterford**.

(i) **Dublin** (309), the metropolis of Ireland, stands on the Liffey. It is rather larger than Bradford; and its position on the part of the Central Plain which faces England makes it a centre of internal and foreign trade. It has a university, and two cathedrals. The port is **Kingstown**. The chief manufacture of Dublin is porter ("Guinness's Stout"); then whisky; then poplin—a handsome cloth of silk and linen. The city stands 66 miles from Holyhead and 223 miles from Glasgow.

(ii) **Belfast** (385), in Antrim, at the head of Belfast Lough, is the most prosperous and manufacturing city in Ireland and the centre of the linen and cotton manufactures of the island. It has a larger foreign trade than even Dublin, and nine-tenths of all the Irish shipping is built at Belfast. Belfast has also a growing shipbuilding trade; rope manufactures; the manufacture of aerated waters, etc. etc.

(iii) **Cork** (76), on the Lee, is the capital of the largest county in Ireland, is the largest city in Munster, and the third largest in the whole country. It has a good foreign trade, and also some woollen and linen manufactures. **Queenstown**—a splendid natural harbour—is its port, and the first place of call for American steamers. The vessels of seven different lines touch every week to embark or discharge passengers and letters. The harbour could contain the whole British navy. The chief manufactures are leather, gloves, gingham, friezes, flour, and whisky. The chief exports are provisions, butter, live-stock, and leather.

(iv) **Limerick** (38) stands on the Shannon, just where it begins to widen into an estuary, and at the western end of the fertile district called the "Golden Vale."

(v) **Londonderry** (40), on the Foyle, is a busy seaport and manufacturing town. It is famous for the terrible siege it sustained from James II. in 1689. It still preserves its old walls and the cannon on them used in the defence.

(vi) **Waterford** (27), on the Suir, is the seat of the export trade to Bristol, chiefly in farm-produce.

**25. Historic Towns.**—There are several towns in Ireland which have made their mark in the sad history of the country, the most famous being : **Drogheda, Dundalk, Galway, Armagh, and Trim.**

(i) **Drogheda**, on the Boyne, was stormed by Cromwell in 1649; and the garrison of 2000 men put to the sword.—A little above the town, the Battle of the Boyne was fought in 1690, which put an end to the influence of James II. in Ireland.

(ii) **Dundalk**, in County Louth, at the head of Dundalk Bay, is an ancient city where Edward Bruce (the brother of Robert) crowned himself King of Ireland in 1318. He was the last king of all Ireland.

(iii) **Galway**, on Galway Bay, is one of the oldest and quaintest towns in Ireland. It was once the seat of a considerable trade with Spain. A line of steamers from Galway to New York existed about thirty years ago; but it did not succeed. It is the seat of one of the Colleges of the National University.

(iv) **Armagh** was, from the 5th to the 9th century, the metropolis of Ireland. It is still the ecclesiastical metropolis. Its cathedral was founded by St. Patrick.

(v) **Trim** is the county town of Meath, which was the estate of the chief king of Ireland, whose palace was at Tara.—The Duke of Wellington (Arthur Wellesley) was born near Trim in 1769.



## THE INDUSTRIAL AND COMMERCIAL RIVERS OF GREAT BRITAIN

1. **THE THAMES** is not only one of the most beautiful rivers in England, it is one of the two greatest commercial rivers in the world. Of great manufacturing industries it has few. Its upper reaches are of the most lovely character : woods, meadows, gardens, green aits (or islands), lovely lawns, hills, and beautiful buildings diversify its course. Crowds of boats and pleasure-yachts make the waters gay. Some of the most beautiful towns in the world stand on its course : **Oxford**, "the fair city with its dreaming spires ;" **Windsor**, the grand castellated pile which has been so long the home of our English sovereigns ; **Hampton Court**, with its beautiful palace and gardens ; **Richmond**, with its Hill, from the foot of which the richest and most perfect English scenery stretches out in every direction. But, as a commercial stream, the Thames has for ages brought to London and to England the produce of all the lands of the world. Even in Roman times (before 410), it was a place of trade. After the Roman Period, the first foreign merchants who traded with London were the "Easterlings," a guild of traders from the North of Europe. They were at Billingsgate as early as 979. Not till 1660 was there a single dock. The first great dock was the **East India Dock**. There are now, from **London Bridge** to **Tilbury**, a series of the most magnificent docks in the world. Among these the best known are : the **St. Katherine's Docks** ; the **London Docks** ; the **West India Docks** ; the **East India Docks** ; the **Victoria and Albert Docks** ; and the **Surrey Commercial Docks**, which last are on the south or Surrey side of the river. The goods carried into these docks are of every kind grown or produced in every quarter of the globe. Now that the **Tilbury Docks** (24 miles from London), opposite Gravesend, are completed, they are attracting to themselves a great deal of the commerce which used to thread the long and tedious passage up the river.—The magnificent granite

embankments on the Thames, among which the **Victoria Embankment** is the best known, add to the beauty and splendour of London. Between London and the mouth of the river stand several towns with large Government Establishments ; **Deptford** (with its great **Victualing Yard**) ; **Woolwich** (with its Dockyard and enormous Arsenal) ; **Chatham**<sup>1</sup> (a great naval station) ; **Sheerness**<sup>1</sup> (with its naval dockyard).—At the **Nore Light**, which is generally regarded as the mouth of the river, the Thames is six miles broad.

2. **THE MERSEY** ranks, along with the Thames, as the greatest commercial river in the world. Where it begins to be commercial, it is rather a broad arm of the sea than a river. The upper parts of its course are very narrow ; and on these stand : **Stockport** (a cotton-spinning-town) ; **Warrington** (a busy seat of the leather manufacture) ; **Widnes** (on the Lancashire bank) and **Runcorn** (on the Cheshire), both towns celebrated “for good soap and bad smells.” When the **Weaver**—a river which flows from the salt regions of Cheshire—joins the Mersey, its estuary and commercial life begin. Opposite Liverpool, and in Cheshire, stands **Birkenhead**—a rising port, which owes its prosperity to the enterprise of Liverpool. This city is the chief seat of the “American trade.” It is a centre on which an enormous number of steam-vessel lines converge ; and it is also a centre of vast railway and canal systems. It can boast, after London, the most splendid and capacious docks in the world. The Liverpool and Birkenhead docks possess a line of quayage which amounts to 34 miles. The dock frequented by the great Atlantic Liners is called the **Alexandra Dock**. Several of these lines own vessels of 40,000 tons burden. Some of them can cross the Atlantic—can run from land to land in England and the United States in a space of time under six days.—The “landing” stage on the Mersey is the largest floating pier in the world ; and it is also one of the most crowded thoroughfares.—The most celebrated Steam Lines that are connected with Liverpool are : the **Cunard Line**, a fleet of vessels that has carried passengers for fifty years without the loss of a single life ; the **White Star Line** ; and the **Allan Line**.

(i) The names of the **CUNARDERS** generally end in *ia* ; as the **LUCANIA**, **CAMPANIA**, etc.

<sup>1</sup> These two are properly on the Medway, which, however, is a tributary of the Thames.

(ii) Up to 1914 the MAURETANIA held the record from Queenstown to New York—4 days, 10 hours, 41 minutes.

(iii) The ships of the WHITE STAR LINE have names that end in *ic*; as the BRITANNIC, the GERMANIC, etc. Up to 1914 the AQUITANIA (47,000 tons) was the third largest ship in the world.

(iv) The ALLAN LINE, which runs to Canada, prefers names that end in *ian*, as the SARDINIAN, the SARMATIAN, etc. In 1905 the VIRGINIAN and VICTORIAN were the first turbine-propelled steamers to reach America (the former was out of sight of land only 3 days, 20 hours).

The above lines connect Liverpool with America. But Liverpool has, in addition, lines to all parts of the world: to the Pacific; to the River Plate; to the West Indies; to the Amazon; to Egypt, to India, and to China.—Liverpool is the greatest cotton emporium in the world.

3. **THE TYNE** is one of the great industrial rivers in England. Its commerce and industry begin at the head of the tidal flow. "From Newcastle to Shields is a region of fire and smoke, through which the river wends its way, while it bears on its bosom the mighty ships, the commerce of great nations." Its shores are occupied by docks, shipbuilding yards, engine works, foundries, factories innumerable; and the clang of hammers, the clatter of coals falling into the iron vessels that carry them, the whistle and rattle of the locomotive, combine to form one unceasing roar. The commerce of the Tyne had its origin in, and is still based on, coal. The trade in coal has now existed for more than five centuries. To carry the coal of the Northumberland and Durham coal-field, a great shipbuilding industry has been created. Other industries soon associated themselves; because the tendency of all manufactures is to go where cheap fuel (that is, power) can be found. Glass and chemicals are two enormous industries that have made a home on the Tyne. "Even a hundred years ago more glass was made on Tyneside than in the whole of France." Vast seams of fire-clay, which overlie the coal, have given rise to the manufacture of retorts, pipes, etc. Since 1850, the river has been deepened and improved as a waterway in every manner; and there is now a depth of twenty feet of water even at low tide for the whole distance from Shields to Newcastle. "The river itself, from the sea to Scotswood, may be considered as one great tidal dock, available in all weathers, and at all times of tide, for the largest cargo steamers in the merchant navy."



The tonnage of the Tyne-ports, taken together, is only a half less than that of Liverpool, and is about double that of Glasgow. The chief works on the Tyne are Armstrong's gun-works at **Elswick**; and the large shipbuilding yard of **Jarrow-on-Tyne**.

"It would be difficult to find, even in this busy country, a spot or district in which we perceive so extraordinary and multifarious a combination of the various great branches of mining, manufacturing, trading, and shipbuilding industries; and it is very doubtful whether the like can be shown, not only within the limits of the land, but upon the whole surface of the globe."

4. **The CLYDE.**—The Clyde is the most remarkable example in Great Britain of how much can be done by the energy and the thought of man. "Nowhere, as at Glasgow," says a French engineer, "is there revealed in such luminous traits all that can be done by the efforts of man, combined with patience, energy, courage, and perseverance, to assist nature, and, if necessary, to correct her. To widen and deepen a river previously rebellious against carrying boats, to turn it into a great maritime canal, to bring the waters where it was necessary to float the largest ships, and finally to gather a population of 800,000 inhabitants, all devoted to commerce and industry, upon a spot where only yesterday there was but a modest little town, almost destitute of every species of traffic—such is the miracle which, in less than a century, men have performed at Glasgow."

Eighty years ago it was a clear-flowing stream which a boy could wade across; to-day it is a harbour which can float ships drawing 26 foot of water. The city of Glasgow has spent over eleven millions of money in bringing this about. Glasgow, besides being the second city in the Empire and a great seaport, is also the seat of one of the best and most extensive shipbuilding works in the world. It is a well-known saying in Scotland that Glasgow has made the Clyde and the Clyde has made Glasgow. The tonnage of ships entering and clearing the port of Glasgow is over 5,000,000 for the year; and it comes next to that of Hull. The largest and swiftest steam-vessels have also been built on the Clyde. Glasgow ranks next to Cardiff and Hull as a great coal-exporting port.

(i) "Whereas a hundred years ago there was a depth at low water of 15 inches, now they have at Glasgow from 18 to 20 feet at low-water; and, whereas even lighters could once not pass to and from Glasgow, except it be in the time of flood or high-water at spring-tides, now steamers have been docked at Glasgow that are amongst the largest in the world."

(ii) "The Firth of Clyde is bordered along its ancient sea-margin with an almost continuous fringe of seaports and watering-places (Greenock, Rothesay, Ayr, etc.); and like the last 14 miles of the river, is one of the world's chief commercial water-ways."

(iii) It was on the Clyde that the first successful steam-boat in Europe was launched by Henry Bell in the year 1812. The name of this ship was the COMET.

5. **The Wear.**—The Wear, though a short stream, is one of the busiest in Great Britain. Its two chief industries are the building of iron ships and the export of coal. As regards the latter it ranks fifth among the ports in Great Britain. The Wear is practically the port of Sunderland; and Sunderland, besides exporting coal, sends out large quantities of lime and glass bottles. Its chief imports are timber and grain.

(i) The Wear is the central river of the county of Durham, the other streams—the Tyne and the Tees—lying respectively on its northern and southern borders.

(ii) Durham has the largest coal production of any county in England, and its output for the year is over 30 million tons. Lancashire comes next to it with 22 millions.

6. **The Tawe.**—On this stream stands a large number of great smelting works—silver, copper, lead, nickel, cobalt, and many others. Behind Swansea, which stands at its mouth, lies a coal-field which is computed to contain nearly 200,000 million tons of minerals; and to this coal-field come from all parts of the world copper and other ores to be smelted. The Tawe is also a great commercial river, and the total tonnage of Swansea for the year amounts to over 3,000,000 tons. Swansea also exports a large quantity of coal, and in this respect stands next to Sunderland. In addition to the metal-smelting works of the neighbourhood, there are large works for the making of steel armour-plates, and also numerous factories for the manufacture of tin plates.

7. **The Taff.**—The Taff is more of a commercial than an industrial river, and its great port of Cardiff sends out the largest amount of coal of any port in the world. Twenty years ago the total export of coal was only three million tons per annum; to-day it is over seventeen million tons. The port of Cardiff is not only a great coal port: it is the outlet for the enormous mineral and manufactured products of the central part of the vast South Wales mineral-field. On this mineral-field stand densely-populated, industrial districts and large towns

like Merthyr-Tydvil. The rapid rise of Cardiff is due chiefly to the opening of the canal which joins Merthyr-Tydvil with the sea. The Bute and other docks are among the largest in the world.

8. **The Humber.**—This great Northern river, regarded as the estuary of the great rivers of Yorkshire, Nottingham, and Derby, is one of the most industrial rivers in England, but in itself has a character less industrial than commercial. Its port—the port of Hull—has grown within the last forty years with a steadiness and rapidity that is phenomenal. Hull possesses a trade with all the great commercial seas of the world—the Baltic, the Mediterranean, the Black Sea ; and it also sends ships to India, Australasia, and the two Americas. In fact, “the trade of Hull may be truly said to be with the whole world.” Within the last twenty years the tonnage of Hull has more than doubled itself. Its exports, in addition to coal, are of every possible kind—cottons, woollens, linens, machinery, etc. There is also a considerable amount of iron shipbuilding carried on.

It has been proposed to make a ship-canal from the Humber to Leeds ; and this would have the effect of putting the great wool-capital of England on the same footing as Manchester, the great cotton capital. (The same proposal has been made in regard to Birmingham.)

9. **The Tees.**—The river **Tees** is a short stream which expands into a wide estuary a little below Middlesbrough. It is more of a commercial than an industrial stream, though Stockton and Middlesbrough possess immense industries. Sixty years ago it was a shallow winding river with neither dock nor ship upon its waters ; to-day Tees-side is one of the great steel-making regions in the kingdom, and Middlesbrough is one of the greatest exporters of iron, coal, and salt in Great Britain. “Stockton builds bridges, rolls lead as well as iron, manufactures pottery, bottles, glass and gas-holders, and is one of the chief of the flour-producing towns of the north.” But it has been surpassed by Middlesbrough in industry, wealth, and population—by Middlesbrough, which is “one of the marvels of Northern enterprise” and “the youngest-born of England’s greatness.” Sixty years ago the population of Middlesbrough amounted to 154 persons ; to-day it numbers over 100,000. This rapid growth is due to the discovery of the rich iron-mines of the Cleveland district. In 1850 the output of Cleveland iron-stone consisted of one ton : fifteen years after, of nearly 3,000,000 tons ; to-day, of over 5,000,000.

(i) "Iron is woven and interwoven, as no other article is, with the lusty life of the nation."—COWEN.

(ii) "Threescore years ago scarcely a house broke the solitude from Stockton to the sea, and nothing but the smoke from the infrequent farm chimney rose up into the ether. Now the sight in the passage up or down the river by day is startling, by night is spectacular. The clang of the riveters in the shipyards, the roar of the blast furnaces, and the thud of the steam hammers at the rolling mills and the engineering works fill the ear. A long halo of light spreads over a large part of the scene from the Tees Bridge Iron Company's works at Stockton Bridge down to the huge steel works at Eston, and tongues and darts of flame rise up into it. Nearer this, it is seen that fierce coruscations of light flame up and out from the furnaces; ever and anon, huge incandescent heaps are being hurried here and there in the rolling mills, and are taking shape beneath the rolls, whitening the faces of the workmen near; from little orifices pencilled streaks of painful light are visible; and now and again one of the huge steel converters sends forth 'a hailing fount of fire' that rises high in the air, and casts a strange yellow gleam over the earth for miles."—INDUSTRIAL RIVERS OF ENGLAND.

**10. The Forth.**—The Forth is the second commercial river of Scotland. It is its estuary that is of most commercial importance. This estuary, which is called The Firth of Forth, lies between the town of Alloa and the German Ocean, and is 51 miles long. On both of its shores lie some of the most wealthy and industrious counties in Scotland. Its waters are from 3 to 37 fathoms deep; the course for vessels is thoroughly lighted all the way up; and above the great Forth Bridge is St. Margaret's Hope, which is one of the safest roadsteads in the kingdom. Its great ports lie along both shores, and include **Leith, Kirkcaldy, Granton, Bo'ness, and Grangemouth**. The port of Leith ranks next to **Glasgow** in point of tonnage; and the port of Kirkcaldy comes next to Leith. The trade of the Firth of Forth is chiefly with the great ports of Belgium, Holland, Denmark, and the north of Germany.

(i) At **St. Margaret's Hope** (on the north shore) is being made the new North Sea naval station, called **Rosyth** (pronounced *Rosythe*).

(ii) The height of the Forth Bridge, which is the largest, highest, and best built bridge in the world, is of course sufficient to enable the tallest ships to sail under it.

(iii) **Grangemouth** stands at the end of the Forth and Clyde Canal, carries away the goods sent by that canal and also those manufactured by the Carron Iron Company.

**11. The Tay.**—The Tay has only one great port on its shores—the port of Dundee. The only town of any importance above Dundee is Perth, the commerce of which is small. Dundee is a tidal harbour,

which has several large and magnificent docks ; and the tonnage of vessels entering the port is growing every year. Besides its trade in the export of linen and jute manufactures, Dundee is the centre of the whale and seal-fishing trade of Great Britain. The chief import of Dundee is that of jute, which now amounts to over 160,000 tons a year.

## THE CHIEF SEAPORTS OF GREAT BRITAIN AND IRELAND

1. **Our Chief Ports.**—The Island of Great Britain is remarkable among all the islands of the world for the large number of deep and spacious harbours it possesses. Most of these harbours stand either on rivers or on river-mouths. Some of the largest lie in the very middle of densely peopled, industrial districts. So important is it for a great manufacturing district to possess a large harbour close to its factories, that Manchester has already constructed a deep ship-canal between the Mersey and itself, and that Birmingham has resolved to connect itself with the sea by a similar ship-canal. To enable ships to reach these, millions of money have been spent on the dredging of the rivers. The three best examples of this are to be seen in London, Glasgow, and Newcastle. Great Britain now possesses more than twenty ports which can admit the largest steam-vessels afloat,—that is, which have a depth of about twenty-five feet of water. These great ports may be divided into five classes :

(a) The first class consists of those ports the tonnage of which amounts to over 10 millions per annum. To this class only four ports belong—**London** ( $18\frac{1}{2}$ ), **Cardiff** ( $15\frac{1}{4}$ ), **Liverpool** ( $14\frac{1}{2}$ ), and the **Tyne Ports**—Newcastle, and North and South Shields, which the Board of Trade classes as one port (14).

(b) The second class includes those ports with a tonnage of between 5 and 10 millions per annum. To this class belong three ports—**Southampton** (9), **Hull** ( $7\frac{1}{4}$ ), and **Glasgow** ( $5\frac{1}{4}$ ).

(c) The third class includes those which have a tonnage of between 2 and 5 millions. To this class belong **Dover** ( $4\frac{1}{2}$ ), **Newport**,

Mon. (4), **Middlesbro'** and **Grimsby** (each  $3\frac{1}{2}$ ), **Swansea** ( $3\frac{1}{4}$ ), **Sunderland**, **Blyth**, and **Leith** (each about 3), **Manchester**, **Cork**, and **Bristol** (each about 2).

(d) The fourth class comprises those ports which have a tonnage of between one and two millions. To this class belong **Grangemouth**, **Weymouth**, **Hartlepool**, **Harwich**, **Methil**, **Port Talbot**, **Folkestone**, **Goole**, and **Burntisland**.

(e) The fifth class is made up of those which have a tonnage of about one million. To this class belongs **Newhaven**.

(i) By the **tonnage** of a port is meant the total tonnage of all the ships that enter and that leave ("clear") the port during one year.

(ii) There might be a sixth class of ports, the tonnage of which, though only ranging between half and a quarter of a million, is yet considerable. Under this head may be included **Gloucester**, **Aberdeen**, **Ardrossan**, **Bo'ness**, **Belfast**, **Dublin**, and **Greenock**.

**2. Ports for Foreign Commerce.**—In point of value of exports and imports taken together, the ports of the United Kingdom may be divided into four classes :—

(a) The first class includes those the value of whose turnover amounts to over 300 millions sterling a year. There are only two—**London** (£411 m.), and **Liverpool** (£370 m.). These two do nearly two-thirds of the whole foreign trade of the United Kingdom.

(b) Over £50 millions.—These are **Hull** (£84 m.), **Manchester** (£56 m.), **Glasgow** (£54 m.), **Southampton** (£53 m.).

(c) Over £30 millions.—These are **Grimsby** (£37 m.), and **Harwich** (£34 m.).

(d) Over £10 millions are **Tyne Ports** and **Cardiff** (each £24 m.), **Leith** and **Bristol** (each £22 m.), **Newhaven** (£20 m.), **Folkestone** (£19 m.), **Goole** (£18 m.), **Dover** (£16 m.), **Middlesbro'** (£14 m), **Swansea** (£13 m.), **Belfast** (£11 m.).

In a fifth class—just under £10 m.—may come **Newport**, **Dundee**, and **Grangemouth**—each £9 m.



3. **British Shipping.**—The mercantile navy of the United Kingdom consists of over 90,000 vessels, of which about 8500 are steamships. The tonnage of these vessels amounts to over eighteen and a half million tons; and they are manned by 250,000 sailors, of whom 150,000 are engaged in the foreign trade alone. Much of our commerce is however also carried by foreign ships. Of these foreign ships Norway and Sweden have the largest tonnage. Germany comes next, and—after Germany—France and Denmark.

4. **LONDON.**—London is the largest port in Great Britain and in the world. Its foreign trade exceeds that of New York or of any other port on the globe, and amounts to 30 per cent. of the whole trade of the United Kingdom. The docks of London are among the largest in the world, and they are connected with all the main lines of railway in Great Britain. The trade of London is chiefly with the continent of Europe, India, China, and Australasia; and some of the greatest steam-lines have London as their headquarters.

Some of the great steamship lines which start from London are: (a) The **Peninsular and Oriental** (P. and O.), for India, China, Japan, and Australia. (b) The **Orient**, for Australia. (c) The **British-India** (B.I.), for India, East Indies, and Queensland. (d) The **Shaw Savill and Albion**, for New Zealand via the Cape route. (e) The **Union-Castle**, for South Africa.

5. **LIVERPOOL.**—Liverpool does about 27 per cent. of the whole foreign trade of the United Kingdom. While London sends most of its ships to the East, the Trade of Liverpool is chiefly with the West, that is, with the two Americas. London does the largest import trade; Liverpool the largest export trade. Liverpool sends out from its docks about one-third of all the exports of the United Kingdom and receives one-fourth of all the imports. It is also the greatest cotton-port in the world.

(i) There are seven railways in direct connection with the port of Liverpool.

(ii) Liverpool not only receives by far the largest amount of raw cotton; it also sends out the largest amount of manufactured cotton products. It sends out fully five-eighths of all the cotton goods manufactured in this country.

6. **CARDIFF and TYNE PORTS.**—Cardiff—in point of tonnage the second port of the United Kingdom—is now the first coal port in the world, as it exports annually over 17 million tons of coal. The **Tyne Ports**—fourth in tonnage—are the oldest coal ports in

England, and have supplied London with coal for several centuries. Their trade is chiefly with the Baltic and the ports on the west coast of the Continent. They also supply the Mediterranean ports with coal.

**7. HULL.**—Hull is a flourishing river-port, which, as regards tonnage, occupies the fifth place among the ports of the United Kingdom. But if we look at the *value* of its imports and exports, we shall find that it occupies the third place. Its trade is chiefly with the Baltic, the western ports of Europe, and the Mediterranean.

**8. GLASGOW.**—Glasgow comes next to Hull in the amount of its tonnage and just after it in value of its trade. Its prosperity began with its trade in sugar and tobacco with the West Indies, but it now sends ships to all parts of the world, especially to the two Americas and to India. All the railways of Scotland and England are connected with the harbour of Glasgow.

**9. BRISTOL.**—Bristol is one of the oldest seaports of England. It occupies the third place as regards the importation of tea, tobacco, and sugar. In addition to its foreign trade, it has also a large coasting trade, as well as a flourishing trade with Ireland.

**10. LEITH.**—Leith, the port of Edinburgh, is the second port in Scotland. It has a growing foreign, colonial, and coaling trade, and also a prosperous trade with the Baltic and North Germany.

**11. SOUTHAMPTON.**—Southampton is a port which carries on trade chiefly with the West Indies, the United States, and Cape Colony.

**12. Nature of Trade.**—Every considerable port in the United Kingdom has a general trade. The following table, however, exhibits the nature of the special export trade of some of the principal ports.

**Coal**—Cardiff, Tyne Ports, Sunderland, Swansea, and Bristol.

**Iron**—Middlesbrough, Newport, Bristol, Hull, Liverpool, Swansea.

**Cottons**—Liverpool, Manchester, Hull, Glasgow.

**Woollens**—Liverpool, Hull, London.

**Linen and Jute**—Belfast, Goole, and Dundee.

**Fish**—Grimsby, London, Hull.

## THE UNITED KINGDOM INDUSTRIES

**1. Textile Industry.**—By far the most important industry in the United Kingdom is the textile industry—that is, the spinning and weaving of cottons, woollens, and linens. In this industry a very large amount of capital has been sunk, and the value of this capital is generally given at 250 million pounds sterling. This industry employs, moreover, over one million of people, men, women, and children. The value of its annual products amount to £200,000,000. Of this sum the cotton products amount to 120 millions; the woollen to 55 millions, and the linen to 25 millions.

(i) A century ago the total annual value of textile products in the United Kingdom was 22 millions. Of this sum the value of the woollen goods amounted to 17 millions, of the linen goods to 4 millions, and of cotton goods to only one million. The position of cotton is now reversed.

(ii) Although only about one million people are engaged in these industries, it is estimated that at least five millions of people are dependent on them for their livelihood.

(iii) About half the exports of the United Kingdom consist of textiles.

**2. Metal Manufactures.**—The manufacture next in importance to the textile industry is the manufacture of iron and steel goods. This includes machinery and tools of all kinds. While the annual value of the textile exports amounts to about 172 millions, that of metal goods (excluding machinery) amounts to less than one-third that sum.

(i) Metals and articles manufactured from metals (with the exception of machinery) exported every year have a value of about 64 millions.

(ii) The annual value of machinery and mill-work exported is over 30 millions.

**3. Agriculture.**—The soil of the United Kingdom has been diligently cultivated for many centuries. Of the 77 millions of acres of which this soil consists, only  $13\frac{1}{2}$  millions are uncultivated (mountains, etc.). The chief crops are corn, green crops, and grasses. The

largest crop is that of **oats**: next to oats comes **wheat**, and next to wheat comes **barley**.

(i) Since the large influx of grain from the United States, Russia, and India, it has not paid the British farmer to grow much wheat, and he has therefore put down a great deal of his land in permanent pasture. There are now about 17 millions of acres of land in Great Britain under pasture.

(ii) Ireland too has felt the same necessity and has now over 9 millions of acres under pasture to about half that quantity of arable land.

(iii) The farming of the land in Great Britain is so skilful that one acre of land grows about 46 bushels of oats; about 40 bushels of barley, and about 34 bushels of wheat. (In Australia the average produce of wheat is about 8 bushels per acre.)

**4. Mining.**—The two most important minerals raised in the United Kingdom are **coal** and **iron**. The value of the coal raised every year is about £110 millions<sup>1</sup>; and the value of the iron extracted from the iron ore is about 16 millions annually. Next to these come **tin** and **lead**; the value of the tin being a million sterling, and that of lead over £250,000 per annum. The richest coal-field in England is that of Durham, which puts out over 39 million tons per annum. Before Durham comes Scotland, the annual output of which is about 40 million tons. The largest shipping-port for the export of coal is Cardiff, which exports over 17 millions of tons per annum—that is—as much as Newcastle, Newport, Shields, and Sunderland put together.

(i) Ireland raises only about 100,000 tons of coal per annum.

(ii) The value of the **stone** quarried in the United Kingdom every year is about 9 millions sterling; of slates over one million.

(iii) In addition to the metal raised in our own island, we import from Spain and Sweden great quantities of iron, and from Spain, lead, copper, and quicksilver.

**5. Sea-Fisheries.**—The sea-fisheries of Great Britain are of considerable value. Including shell-fish and salmon, the fish taken bring in annually the sum of over 10 millions sterling. The number of men employed in the British fisheries is nearly 104,000. Of this number about 44,000 are Scotchmen, 29,000 English, and the rest, Irish. There are about 25,000 boats engaged in this industry.

(i) Five-sixths of the fish taken are caught off the east coast; and the chief fishing grounds are the Dogger Bank (for cod), the sea off Yarmouth and Lowestoft, and in general the whole of the east coast of Scotland.

<sup>1</sup> Average for the years 1908-1912. In 1912 (an exceptional year) 260,000,000 tons of coal, valued at £117,921,000, were raised.

(ii) The pilchard fishery is almost entirely confined to the coast of Cornwall, and mackerel are caught chiefly off the coasts of Kent, Sussex, and Dorset.

**6. Commerce.**—The United Kingdom is the greatest commercial country in the world. Its total imports and exports amount to over £1343 million sterling per annum (1912). This is equivalent to a turn-over per annum of over £26 per head of every man, woman, and child in the United Kingdom; while Russia turns over only 15s. per head per annum. Of the total trade done by the United Kingdom,  $90\frac{1}{2}$  per cent. falls to the share of England and Wales, eight per cent. to Scotland, and one and a half per cent. to Ireland. About one-fourth of all our exports goes to our own possessions; and we receive from these possessions about one-fifth of all the imports which come into this country.

(i) The chief imports consist of articles of food and drink.

(ii) In the second rank come raw materials for the textile and other manufactures of the country.

(iii) In the third rank come metals.

(iv) The largest exports are those of yarns and textile fabrics.

(v) In the second rank of exports come articles manufactured from metals.

(vi) The six great sources of wheat for this country are Russia, the United States, India, Argentina, Australasia, and Canada. The United States used to send the largest supplies, but they are using more and more themselves every day.

**7. Railways and Telegraphs.**—The United Kingdom possesses over 23,000 miles of railway for the internal traffic of its people and commerce. These railways have cost the country over 1400 millions of pounds. About 1400 million journeys are performed upon them every year. . . . Of telegraph and telephone lines there are now about 62,000 miles, and these contain about 2,610,000 miles of wire. The number of telegraphic messages sent every year is over 90,000,000.

(i) England and Wales have over 16,000 miles of railway; Scotland about 3800, and Ireland about 3400.

(ii) Of the 90 millions of telegrams sent annually in the United Kingdom England sends about 75 millions, Scotland about 10 millions, and Ireland about 5 millions.

(iii) The United Kingdom possesses 3907 miles of canal, and the amount of inland navigable waters is nearly 5000 miles. This gives 4 miles of inland navigation to every 100 square miles of land. (Germany has double this amount, and Belgium has nearly three times as much.)

## THE CONDITION OF THE UNITED KINGDOM

*N.B.*—All figures refer to the year 1912 unless otherwise stated.

# 1. Area . . . . . 120,979 square miles

(i) Of this **England** has over 50,000 square miles.

(ii) **Wales** has over 7000.

(iii) **Scotland** (with its islands) has 29,785.

(iv) **Ireland** has over 32,000.

(v) The **Isle of Man** has 227 square miles.

(vi) The **Channel Islands** have 75 square miles.

# 2. Population (1911) . . . . . 45,365,599

(i) **England and Wales** have 36,075,269.

(ii) **Ireland** has 4,381,951.

(iii) **Scotland** has 4,759,445.

(iv) The **Islands** have 148,934 people.

# 3. Exports . . . . . £598,961,130

(i) The most important export is that of yarns and textile fabrics, which amounted to over £110,000,000.

(ii) Next to these come metal goods and manufactures of every kind, to the amount of over £60,000,000.

# 4. Imports . . . . . £744,640,631

(i) The largest import consists of articles of food and drink. These amount to more than £200,000,000.

(ii) The next largest import consists of raw materials for our manufactures, which amount to over £150,000,000; next to these come metals—over £30,000,000.

## Twelve Principal Exports.

	£ m.
Cotton manufactures (all kinds, and yarn), . . . . .	118
Iron and steel (including manufactures), . . . . .	48
Coal, coke, etc., . . . . .	42
Woollen manufactures (all kinds, and yarn), . . . . .	37
Machinery, . . . . .	33
Chemicals, . . . . .	21
Apparel (ready-made), . . . . .	15
Other textile manufactures, . . . . .	14
New ships, . . . . .	7
Miscellaneous metals, . . . . .	12
Earth and china ware, . . . . .	4
Hardware and cutlery . . . . .	8

## Twelve Principal Imports.

	£ m.
Corn and flour (all kinds), . . . . .	70
Cotton (raw), . . . . .	80
Metals (all kinds), . . . . .	59
Meat (dead), . . . . .	41
Wood, . . . . .	28
Butter and margarine, . . . . .	27
Wool (raw), . . . . .	36
Sugar, . . . . .	25
Other textile materials, . . . . .	18
Silk, . . . . .	14
Woollen manufactures, . . . . .	10
Oil seeds, etc., . . . . .	37



### 5. Manufactures . . . . . The greatest in the World

The largest industry is the **textile industry**, which is carried on in about 7000 factories, and gives employment to over 1,000,000 hands.

### 6. Trade with its own Colonies . . . . . £420,000,000

### 7. Trade with Foreign Countries . . . . . £930,000,000

(i) Our three greatest **Colonial** customers are **Australasia**, **India**, and **British North America**.

(ii) Our three greatest **Foreign** customers are the **United States**, **France**, and **Germany**.

### 8. Communications (internal) . . . . . The best in the World

Although the **United States** possesses a larger mileage of railway per person than the **United Kingdom**, it has very few good roads.

(i) The **United Kingdom** possesses 23,441 miles of **railway**, and adds to its mileage about 120 miles per annum.

About 1,400,000,000 railway journeys are taken every year.

(ii) There are about 62,000 miles of **telegraph** and **telephone line** (with 2,610,000 miles of wire).

There are about 90,000,000 of telegraph messages sent every year. Of these **England** sends 75,000,000, **Scotland** 10,000,000, and **Ireland** 5,000,000.

### 9. Communications (external) . . . . . The best in the World

(i) The **United Kingdom** possesses about 9000 vessels, with a total tonnage of 18,600,000. Of these about 8500 are steam vessels.

(ii) The number of men employed in our commercial navy is nearly 250,000.

## OUR EUROPEAN POSSESSIONS

1. **Gibraltar.**—Gibraltar is the name of a small peninsula and fortress-town at the southern extremity of Spain, and about 14 miles distant from the African coast. It belongs to Great Britain, and was wrested from Spain in the year 1704. The 'Rock' of Gibraltar (1439 feet high at its greatest elevation) is an isolated mass of rock, which is connected with the mainland by a low sandy isthmus. The Rock itself bristles with batteries, and at its foot, on the western side, lie the harbour and town. The east and south sides of the Rock are very rugged, and almost perpendicular. The population of Gibraltar, exclusive of a garrison 6000 strong, is over 20,000.

(i) Gibraltar is of immense importance to Great Britain for five reasons :—(1) It commands the Straits of Gibraltar, and is the **Key of the Mediterranean**. (2) It is a **naval depôt** for coal, stores, and repairs. A protected harbour, with large graving-docks and dockyards, in area about 450 acres, has been constructed by Government; and alongside the moles which nearly enclose the harbour the largest battleships can lie. (3) It is a much-frequented **port of call**. The tonnage of ships entered and cleared at Gibraltar and Malta together exceeds that of the Port of London. (4) It is a **coaling-station** for mercantile vessels. (5) Though Gibraltar has no exports of its own, it conducts a very brisk **transit trade**.

(ii) Gibraltar is 1266 acres in extent, and 1209 miles from London.

(iii) The fortress was besieged, but not captured, by the combined French and Spanish forces for four years, from 1779 to 1783.

The name GIBRALTAR is a corruption of "GEBEL TARIK"—"the hill of TARIK." Tarik was the leader of a band of Moors who stormed the Rock in the year 711, and thus made the first step towards the foundation of the Moorish supremacy in Spain.

2. **Malta.**—The Maltese group of islands lie on a submarine bank which connects Sicily with the African continent. The group is distant about 60 miles from the south of Sicily. **Malta**, the largest, and **Gozo** are the principal islands, and the whole group is the same size as the administrative county of London.

(i) The islands are mere rocks just uplifted above the surface of the sea, but they are happily covered with a thin rich mould. So thin is the covering of earth that *soil* from Sicily was once jocularly reported to be the chief import of Malta.

(ii) The climate is so hot that Malta (in allusion to this and to its strong garrison) has been called "the little military hothouse."

(iii) "The great enemy to vegetation is the violence of the wind, which necessitates the gardens being made small and surrounded with high walls, so that from a distance the place looks like one huge stone-quarry. Yet enormous crops are raised, and fruit of all kinds and of excellent quality is grown in abundance."

(iv) It was on Malta (Melita) that St. Paul was shipwrecked, 58 A.D., while on his voyage to Rome (Acts xxvii).

**3. The Town and Trade.**—The population of the islands is over 211,000. The people are of Arabic descent, and most of them speak a corruption of the Arabic language. **Valetta** (22), on Malta, is the chief town, and it has a grand harbour with deep water right up to the quays. Malta, like Gibraltar, is of great importance as a naval and military station and as a port of call. **Citta Vecchia** (= Old City) was the ancient capital.

(i) The transit trade of Malta is enormous for its size—about £27,000,000. It chiefly consists of **grain and coal** (for the ships that touch there).

(ii) The principal occupation of the people is in connection with the shipping. But **potatoes** are raised for the London spring markets, and there are famous industries of **lace and silver filigree-work**.

## Part II

# OUR ASIATIC AND AFRICAN POSSESSIONS

INDIA

BURMAH

CEYLON

MINOR ASIATIC POSSESSIONS

THE UNION OF SOUTH AFRICA

MINOR AFRICAN POSSESSIONS

**Introductory.**—The possessions held by Great Britain in the continent of Asia are of enormous extent. They consist not only of a vast continuous territory—**India** (with Further India); they also include a large number of islands and footholds, from the island of **Cyprus** in the far west to the island of **Hong-Kong** in the extreme east. Our Asiatic Possessions, in fact, fill nearly half the area of Europe, and contain a population which is more than three-fourths that found in the European continent.

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## INDIA

1. **Introductory.**—**India**, or **Hindustan**, is one of the most remarkable countries in the world. It possesses perhaps the oldest civilisations, and one of the oldest literatures; social traditions of caste and manners which have existed for many thousand years; the most beautiful architecture, the finest decorative work side by side with inferior art in painting and music; one of the most crowded populations in its fertile plains,—with the most striking contrasts between boundless wealth and poverty even to starvation. It has been for ages the object of envy and the prey of different conquerors; until, at length, it reposes in peace and ever-growing prosperity under the rule of **KING GEORGE V., EMPEROR OF INDIA**. It has been called “an epitome of the whole earth.” It unites every feature of the different regions of the globe—even the most opposite: the highest mountains lifting their heads far above the line of eternal snow; the widest and richest plains “bathed in intense sunshine”; arid deserts; and the most luxuriant vegetation. The Empire of **India** is composed of fourteen provinces under direct British rule, and about one hundred and fifty feudatory states, which acknowledge the

overlordship of the British crown. Considered from many points of view, India is rather a continent than a country. After China, it is the most densely peopled region in the world; and it is interesting to us not only for its past history, and for its treasures of art and literature, but also because it is "the greatest market in the world for British textile manufactures, and a great field for the employment of British capital."

(i) The name **Hindustan** is properly limited to the valleys of the Jumna and the Upper Ganges. **India** is properly the country of the **Indus**.

**Hindustan** = *Stan* or country of the Hindus; as **Afghanistan** is = Country of the Afghans, and **Beluchistan** = Country of the Beluchis.

(ii) The Indian title of the British Sovereign is **Kaiser-i-Hind** (= Emperor of India). King George V. announced himself so at the Delhi Durbar on 12th December 1911.

## 2. Boundaries.—India is bounded—

1. **N.** by the mighty buttress—"the double wall"—of the **Himalaya**—the grandest range in the world.
2. **E.** by **Burmah** and the **Bay of Bengal**.
3. **S.** by the blue waters of the **Indian Ocean**, over which the bold headland of **Cape Comorin** looks out.
4. **W.** by the mountainous lands of **Afghanistan** and **Beluchistan**, with the **Arabian Sea**.

(i) "The Himalayas nowhere yield a passage for a modern army."

3. **Extent**.—British India fills the enormous area of 1,766,797 square miles—or more than twenty-five times the extent of England and



Wales. Of this area more than a million square miles is ruled directly by Great Britain; more than half a million is under native rulers—who pay tribute to and are under the control of the Emperor of India. The shape of India is that of a great triangle—the Himalayan Range forming the base, and Cape Comorin the apex.

(i) It extends from 8° to 37° N. lat.—from the hottest regions near the Equator to far within the Temperate Zone. The Tropic of Cancer runs south of the Ganges Valley.

(ii) The greatest length and the greatest breadth are both about 1900 miles; and each side of the triangle is also about 1900 miles. From Peshawur (in the Punjab), at the foot of the Himalayas, to Cape Comorin is 1900 miles—or the same distance as from Ireland to Newfoundland.

**4. Coast Line.**—India has a comparatively short coast line of 3600 miles, which gives one mile of coast to each 490 square miles of area. The coast line is, on the whole, regular and undeveloped: has few good harbours; and, in many parts, the heavy and constant surf makes it difficult of approach. The best-known parts are the **Orissa**, the **Golconda**, the **Coromandel**, the **Konkan**, and the **Malabar Coasts**.

(i) The coast of Great Britain gives 1 mile to about 35 square miles of area.

(ii) The **Orissa Coast** lies between the Hooghly and the Godavery. The **Golconda Coast** lies between the Godavery and the Krishna. The **Coromandel Coast**, which lies between the Krishna and Cape Comorin, has no secure harbour; and boats have to land through the beating surf. The **Konkan** and **Malabar Coasts** lie between Cape Comorin and Bombay.

(iii) The **Runn** (=wilderness) of **Cutch**, between Gujerat and Scinde, is a vast saline swampy desert, larger than all Wales. It becomes a salt lake during the south-west monsoon; but, in the dry season, a plain of sand, with such a stench from the bodies of stranded fish that no horse will face it. South of the Runn is the **Gulf of Cambay**; and these two are joined during the rainy season. The **Gulf of Manaar** lies between Ceylon and the mainland, and is separated from **Palk's Strait** by Adam's Bridge.

**5. Islands.**—The Islands belonging to India are:—**Ceylon**; the **Laccadives**, and the **Maldives** on the west coast of British India; and the **Andamans** and **Nicobars**, on the west coast of Further India.

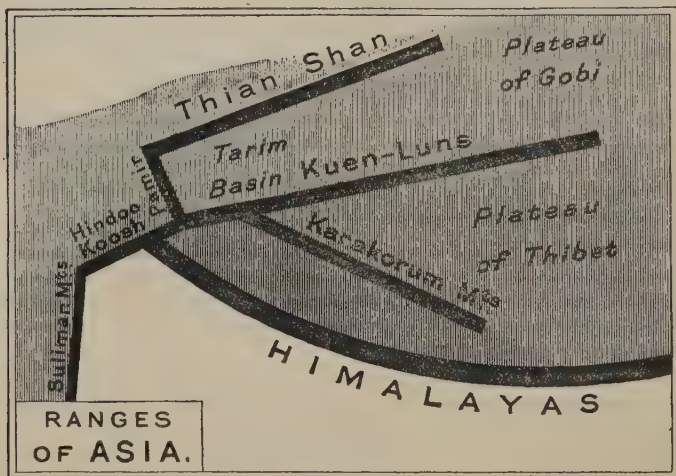
(i) The **Laccadives** are a group of islands of coral formation, among which are 20 atolls, and many islets and reefs, mostly barren, or producing only cocoa-nuts. The **Maldives** or "Thousand Isles" form a chain of coral islets, with 17 atolls, each enclosing a deep lagoon fringed with reefs richly clothed with the cocoa-nut palm. The group is governed by a Sultan, who pays tribute to the Government of Ceylon.

(ii) The **Andamans** are a group of volcanic islands, surrounded by dangerous coral reefs. The harbour of **Port Blair**, in South Andaman, is the chief penal settlement for India. The **Nicobars**, to the south-east of the Andamans, are a group of lovely islands with a very rich flora, but poor fauna.

**6. The Build of India.**—Four highland systems, one vast plain, and one vast plateau make up the relief of India. The highland systems are those of the **Himalayas**, the **Vindhya**s, the **West** and **East Ghats**; the plain is the plain of the Indus and Ganges Valleys—called the **Indo-Gangetic Plain**; and the plateau is the Plateau of the **Deccan**.



(i) **The Himalayas** (= "Abode of Snow") are the grandest range in the world. "The highest plateau of the earth is girdled by the highest chain of mountains." The links in the chain are connected by mountain-knots, which rise into the region of perpetual snow. The whole range fronts the Plain of the Ganges like a stupendous



mountain-wall. Its shape is that of an arc. It is about 1500 miles in length, as far as from London to Constantinople; with a breadth in the west of 180 miles, which increases to 220. The mean elevation, from 17,000 to 19,000 ft., is above the line of perpetual snow; and there are forty peaks that rise more than 24,000 ft. above the sea-level. The highest is **Gaurisankar** (or Mount Everest), which is 29,002 ft. high, nearly double the height of Mont Blanc. Other high peaks are **Kunchinjinga** (28,156 ft.); **Dhawalagiri** (26,826 ft.); **Mount Godwin-Austen** (28,265 ft.) the second highest in the range; and **Nanda-Devi** (25,700 ft.). The Himalayas do not form a single chain, but a number of more or less parallel ridges; and the most southerly one is the scarp of the Thibetan Table-land. The snow-line on the north side is at 18,000 ft.; on the south side it is 3000 ft. lower. This arises from the fact that the heat on the surface of the Plateau of Thibet drives the snow-line up. The higher valleys are filled with immense glaciers, to which those of the Alps are but icicles. The passes cross the Himalayas at a height of from 16,000 to 18,000 ft.; and there is only one pass (that leading from Kashmere) that is lower than 16,000 ft. above the level of the sea. The gamut of **vegetation** runs from that of the Tropics to that of European Alpine regions. Bamboos, palms, acacias, ferns and orchids are found in the lower ranges; then cedars, deodars, etc.; then poplars and conifers; and then a variety of Alpine plants. Cultivation ceases at 7000 ft. The most important cultivated plants are **tea** and **cinchona**.—The **fauna** of the Himalayas is one of the richest in the world; and more especially, there is a very large number of varieties of birds and insects. Bears, leopards, tigers, sun-bears, cat-bears, musk-deer, yaks, and many other kinds of animals, abound in the slopes and in the forests.

(a) "These deep valleys, fringed with overhanging glaciers, are the cradles of the great rivers of Northern India. Here are the sources of the Ganges and the Indus and the Brahmaputra, and of hundreds of rivers and streams whose waters eventually reach the ocean through the mouths of these three great channels. . . . About ten miles south of the chain of great peaks, the rivers descend about 5000 ft. in the course of a few miles."

(b) "The whole of the Bernese Alps might be cast into a single Himalaya valley. If, preserving the form of its great obelisk, you could pile the Matterhorn on the Jungfrau, you would not reach the highest summits of the Himalaya, and would have a mountain less wonderful than the astonishing peak of Dhaulagiri. . . . From the bottom of the valley to the top of Nanda-Devi could be seen at a glance almost 24,000 ft. of mountain. The huge golden or rose-coloured masses and pinnacles of the snowy range extended before us in unbroken succession for more than 250 miles, filling up a third part of the horizon ; while on all sides, as far as the eye could reach, stretched away the red and purple ranges of the lower foot-mountains."—STRACHEY.

(ii) The **Vindhya Range** forms the northern scarp of the table-land of the Deccan. Its southern slope, which faces the valley of the Nerbudda, is very steep and looks like the weather-beaten coast of an ancient sea. The **Satpura Range**, on the south of the valley, runs parallel with it. These two ranges form "the backbone of Middle India ;" and they have also been called "a broad wall dividing Northern from Southern India."

(iii) The **Western Ghats** run along the Malabar coast of India. The plain between them and the sea is only about 30 to 40 miles wide. From this plain they rise like an immense wall facing the ocean ; but their eastern slope is very gradual towards the central table-land. In many parts they rise in magnificent precipices and headlands out of the ocean, and look like colossal "landing stairs" from the sea. The mean height is about 3500 feet ; and the culminating point is **Mahabaleshwar Peak** (4800 ft.). They end in the **Nilgherries** or "Blue Mountains," the highest peak in which is **Dodabetta** (8700 ft.). Then comes a broad gap or depression called the **Pal Ghat**, which seems to have been an old sea-channel ; and lastly comes another set of mountains, **Cardamum** or the **Anamalah Mountains**, which are the culminating height of India Proper. **Anamudi** (8800 ft.) is the highest point.

"The black soil of Southern India, formed from the detritus of the trap mountains, is proverbial for fertility ; while the level strip between the Western Ghats and the sea rivals even Lower Bengal in fruit-bearing palms, rice harvests, and rich successions of crops."—HUNTER.

(iv) The **Eastern Ghats** likewise run parallel with the coast. But they have a much lower mean elevation, are farther from the shore, and are broken into fragments by broad valleys and river gorges. They form the eastern scarp of the Deccan. They are highest in the north.

(v) The mountain-system of India, like India itself, is triangular in shape.

**7. Plains.**—The great Indo-Gangetic Plain or **Plain of Northern India**, stretches from the Khasia Hills to the Suliman Mountains, and lies between the Himalayas and the Deccan. It is triangular in shape, and has a total length of 1500 miles—the distance from Paris to Moscow. It is the most densely peopled part of the whole country. Its eastern slope is drained by the Ganges ; its western by the Indus. It owes its wealth of soil and its enormous fertility to the debris brought down from the great Himalayan chain.

(i) The **Plain of the Ganges** is remarkably fertile and populous, but in the north of it there lies a deep depression, at the foot of the Himalayas, called the **Terai**, with rank vegetation, fever-breeding air, and frequented by all kinds of wild beasts.

(ii) The **Plain of the Indus** contains the fertile **Punjab** (or "Five-River Land"), the **Great Indian Desert** (or "Thar"), and the saline desert called the **Runn of Cutch**. The Thar is called by Hindu geographers "the region of death."

(iii) About 150 millions of people are fed on these two plains. Two harvests, in some provinces three, are reaped each year. Not a pebble could be found on these plains for a distance of 2000 miles or even more, so finely pulverised is the soil.

(iv) The **East Coast Plain**, at the foot of the Eastern Ghats, is much wider and more fertile than the **West Coast Plain**.

(v) If India were to subside about 600 feet, the Deccan would appear as a large island; and the Indo-Gangetic Plain would be a broad channel connecting the Arabian Sea with the Bay of Bengal, and washing the feet of the Himalayas.

**8. Table-lands.**—In addition to the great **Deccan Plateau**, India has the Table-land of **Malwa**, which is supported between the **Aravulli Hills** and the **Vindhyas**.

(i) The **Deccan** ("The South") is a triangular plateau with an average elevation of



The scale of this map will be understood from the fact that Ceylon is nearly as large as Scotland.

Between the Western Ghats and the sea is a low fertile narrow plain called **The Konkan**. From the Konkan to the Deccan Plateau, the land rises in a series of gigantic terraces. Between the Eastern Ghats and the sea are narrow fertile plains called **The Circars** and **The Carnatic**.

(ii) The **Malwa Plateau**, between the Aravallis and the Vindhyas, is comparatively small, but it is inhabited by a people more vigorous than the ordinary "mild Hindu."

**9. Rivers.**—India possesses, in proportion to its size, a greater number of streams that flow into the sea, than any other country in Asia. Its rivers fall easily into two systems, which require to be separately studied. These are:—the river-system of the **Great**

**Northern Plain** ; and the river-systems of the **Southern Plateau**. To the former belong the **Indus**, the **Ganges**, and the **Brahmapootra**, which carry the rainfall, not only of the southern, but also of the northern slopes of the Himalaya to the sea. To the latter, the **Nerbudda**, the **Taptee** on the western slope ; the **Mahanuddy**, **Godavery**, **Krishna**, and **Cauvery**, on the eastern slope.

(i) The **Indus** (1800 miles) rises behind the Himalayan Ranges, on the table-land of Thibet itself, and breaks its way through the whole Himalayan system. It drains an area of 300,000 square miles—one half larger than the area of France. It receives on its left bank, from the western Himalayas, the waters of the **Jhelum**, **Chenab**, **Ravee**, and **Sutlej** ; and these four great rivers, with the Indus itself, make up the **Punjab** or "Five Rivers." On its right bank it receives the southern drainage of the Hindoo-Koosh by the river **Cabul**, at Attock, which is 900 miles from the sea. In its lower course, the Indus receives no affluents at all. Throughout its course, it flows by no important towns ; all the large towns in its basin lie in or near the Chenab and its other tributaries. This arises from the shifting character of its banks.

(ii) The **Ganges**, or the "Holy Ganga" (1500 miles), is the great river of India. From its source to its mouth, it is looked upon as sacred by the Hindus. Although shorter than the Indus, it has a larger area of drainage ; and its basin is immensely more fertile. It drains an area of 500,000 square miles ( $=2\frac{1}{2}$  times France). It flows out of a low arch in a glacier called the "Cow's Mouth," on the southern face of the Himalayas, at the height of 13,000 feet above the level of the sea. It enters the Great Plain at **Hardwar** ; and here it is only 1000 feet above the sea-level. Five-ninths of its water is drawn off to a canal of navigation and irrigation—the largest of its kind in the world—which, after a course of 300 miles, again joins the Ganges at **Cawnpore**. In its lower course, the overflow of the Ganges during the rainy season sometimes extends to a distance of 100 miles on either side of its bed.

Its chief tributary, the **Jumna**, joins it at **Allahabad** ("The Abode of Allah"). The **Goomtee**, with several other large affluents, falls into it from the Himalayas. It joins, in its lower course, the **Brahmapootra** ; and the two together form an immense delta, called the **Sunderbunds**, nearly as large as Ireland, on the outer edge of which new land is constantly building itself out. The Ganges is navigable for large vessels to **Chandernagore**. The branch on which Calcutta stands, and which the Hindus regard with even more reverence than the Holy Ganges itself, is called the **Hooghly**. While the Indus, owing to the shifting of its course, has no important town on its banks, the Ganges has a very large number of large towns, and a countless number of villages on its tributaries large and small. The "Bore" is a tidal wave five to ten feet high, which rushes up the Hooghly with a great roar at the rate of eighteen miles an hour.

(a) "The navigation of the Lower Ganges and its branches is a wonderful spectacle. Every trader and landowner keeps many vessels ; every peasant has his boat, as an English farmer his gig ; and every labourer his canoe. The river-craft are to be counted by hundreds of thousands. At several points the vessels anchor for months at a time and form floating cities and marts, where a great deal of business of all kinds is done."

(b) "The work done by the Ganges, as the water-carrier and fertiliser of the densely peopled provinces of Northern India from its source to its mouth, entitles it to rank as the foremost river on the surface of the globe. It has three distinct stages in its life. In its first stage it dashes down the

mountain-sides of the Himalaya, cuts out deep gullies in the solid rock, and ploughs up glens and ravines on its resistless way. In the second stage it makes its way peaceably through the plain, receives the mud and drainage of Northern India, and rolls on with an ever-increasing volume of water and silt. Its bed is raised by its own silt; and in its third stage, it splits out into channels like a jet of water suddenly obstructed by the finger. Each of the channels thus formed throws out in turn its own channels to right and left."

- (c) "Trees are scarce upon the banks, except near villages; and there is hardly a palm to be seen above Patna. The towns are mere collections of huts, with the landing-place and boats at the bottom of the bank; and at a respectful distance from the bazaar stand the neat bungalows of the European residents, with their smiling gardens, hedgings and fences, and loitering servants at the door. . . . Shoals of small goggle-eyed fish are seen, that spring clear out of the water and are preyed upon by terns and other birds; a few insects skim the surface, and turtles and porpoises tumble along. These all form a very busy contrast to the lazy alligator sunning his green and scaly back near the shore, with his long snout raised high above the water."—HOOKER.

(iii) The **Brahmapootra** (1800 miles), or "Son of Brahma," is a most mysterious river; and many parts of its course are still unknown. It is called the **Sanpo** in Thibet, the **Dihong** in Assam, and the **Brahmapootra** in British India. The Sanpo plunges into a ravine, and flows for about 100 miles through a still unexplored region of the Himalayas. It brings down twice as much mud as the Ganges. In the rainy season its lower course is converted into a mighty inland sea, which floods the whole of the Assam lowlands. Steamers go up 800 miles inland. It has a very large number of tributaries. The Ganges—Brahmapootra Delta, or "Bengal Delta," has an area of about the size of the whole of Ireland. The deposits of mud are said to be in some places about 500 feet thick. A new film is deposited every year, of course this is just the Himalayas themselves worn down.

(iv) The **Nerbudda** (800 miles) rises in the high lands of the Deccan, and flows between the Vindhya and the Satpuras, westward into the Arabian Sea. It is too rapid for navigation. When it enters its middle course, it passes through the "Gorge of the Marble Rocks." The stream of clear green-blue waters winds between two glittering walls of snow-white marble carved into pillars and fantastic shapes by the hand of nature, here and there broken and contrasted by a mass of black volcanic rock, which intensifies the dazzling whiteness of the marble walls. Blue sky, blue waters, black basalt, white marble—together make up a most lovely and striking picture. On the ledges of the bare rock countless swarms of bees have built their hives; and here and there the cliffs are crowned with temples wrought with the most delicate art. South of the Satpura flows the **Taptée** parallel with the Nerbudda, but with only half its length.

(v) The **Mahanuddy** (520 miles) rises on the eastern slope of the Deccan, and though famous for destructive floods (in 1866 the villages of 1½ million of natives were completely submerged), is navigable by boats for about three-fourths of its course. It enters the sea by a large delta which forms the province of **Cuttack**.

(vi) The **Godavery** (900 miles) is the largest river in the Deccan. It rises on the east side of the Western Ghats, crosses the whole Deccan, and drains a basin as large as the whole of Great Britain and Ireland. It enters the Bay of Bengal by a mighty delta. In its basin a network of canals amounting to 500 miles has been constructed, both for navigation and for irrigation, by British engineers. The **Krishna** (800 miles) also rises in the Western Ghats, and crosses the whole peninsula. It falls into the Bay of Bengal, by a delta, not far from the Godavery; and the overflow of both streams forms **Lake Colair**—a lagoon—the largest in India, nearly fifty miles in length by 14 miles broad. The rapidity of the Krishna makes it useless for navigation.



(vii) The **Cauvery** also rises in the Western Ghats (in the Coorg Territory), crosses the Plateau of Mysore, and enters the Bay of Bengal by a large delta. It enters the coast-plain by two magnificent falls, one of which is 460 feet high.

(viii) The deltas of these three rivers are "tracts of inexhaustible fertility," mostly rice-bearing. They have also, within recent years, been traversed by a network of canals; and thus the populations in them are guarded against the risk of famine.

(ix) The lengths of the chief rivers of the Deccan may be given in terms of the length of the Thames (which is 200 miles):

<b>Nerbudda</b> =4	<b>Godavery</b> =4½
<b>Taptee</b> =2	<b>Krishna (or Kistna)</b> =4
<b>Mahanuddy</b> =2½	<b>Cauvery</b> =2½

(x) "Few regions in the world present such an array of splendid cities as those which line the banks of the main streams along the Ganges-Jamna valley for a distance of considerably over 800 miles. Between Delhi, capital of the old empire, now arbitrarily included in the Panjab province, and Calcutta, capital of the new Imperial India at the opposite extremity of this vast river basin, there follow in majestic procession such memorable places as Agra, Cawnpore, Lucknow, Allahabad, Benares, Mirzapur, Patna, Murshedabad, and Dacca."

**10. Lakes.**—The Lakes of India are neither large nor important. There are no great lakes or fresh-water seas such as are seen in Africa or in North America. The largest lakes are either lagoons or expansions of a river-course. The chief lagoons on the east coast are those of **Chilka** and **Palicut**: **Cochin** is on the west coast. The lakes formed by rivers are **Colair**, between the mouths of the Krishna and the Godavery, the overflow of both falling into it; and **Wular** on the Jhelum, in the Vale of Cashmere.

(i) The **Cochin Lagoon** or "Back Waters" affords a long line of inland navigation; and most of the local trade between Cochin and Travancore is carried on in this calm natural canal.

(ii) The **Colair** is more a marsh than a lake; but in the rainy season it becomes a sheet of water about 100 square miles in extent.

(iii) The Deccan Plateau, thousands of years ago, seems to have consisted of a set of lake-valleys or lacustrine basins. The peasants of the Deccan and the Coromandel Coast have restored 35,000 of these lakes (so that some parts of India look like the Finnish Table-land), and use them as reservoirs for irrigation purposes.

**11. Climate** (i).—India stretches through nearly 30° of latitude. All the truly peninsular part of it lies within the Torrid Zone; and therefore within the Monsoon Region. The continental part of it ends in a range of mountains which rise far above the line of perpetual snow. The whole country embraces within its limits the Arctic



Zone of mountain-tracks, the temperate climate of elevated mountain-slopes, and the burning heat of sub-tropical plains. There are three well-marked seasons : the **rainy**, the **cool**, and the **hot**. The hot season lasts from the time the sun crosses the Equator till the period when he is vertical over the Tropic of Cancer. The rainfall varies very much. It varies from 15 inches a year to over 600 inches. In the country round the lower courses of the Indus, the fall is 15 inches ; at Chirra Poonjee, in a narrow valley among the Khasia Hills, as much as 805 inches have been known to fall. But, as in the case of Africa and Australia, there is over most of India a too scanty rainfall, and tanks and irrigation canals have to be kept up to supply moisture to the soil, and to defend the crops against drought and the people against famine.

(i) The **rainy** season lasts from Midsummer till the end of September. The **cool** season is from November till March. The **hot** season is from March till Midsummer.

(ii) At Ootacamund, in the Nilgherries, a town which stands 7200 feet above the sea-level, the mean annual temperature is 58°. But at Bombay, which is on the coast, the mean annual temperature is as high as 84°.

(iii) The rainy season varies with the different parts of India. When the great heat over the Plateau of Thibet has turned the north-east trades into south-west monsoons, the Malabar coast has its rainy season—that is, from April to October. But, when the ordinary north-east trades are blowing,—that is, in winter—they bring rain to the Coromandel coast ; and the rainy season of that coast lasts from October to April. As the north-east trades have very little sea to blow over, these winter rains on the east coast are not so heavy.

**12. Climate** (ii).—Four conditions must be carefully kept in view in forming an estimate of the climate of any part of India : the **latitude** ; the **altitude** (as in the case of the Deccan Plateau) ; the **nearness to a desert**—the desert of Thar in the west ; the **nearness to the sea**. This last condition takes account of the direction of the prevailing winds. In a region which stretches across nearly 30° of latitude—from Ceylon to the high summits of the Himalayas—we should expect to find all kinds of climate—from the air of a “furnace-blast” to the intense cold of the high plateaus. And we do find them. These climates may be considered going from north to south, from east to west, and from the table-lands to the low country.

(i) The slopes of the Himalayas have a cool and refreshing air. At **Agra**, on the Jumna, which receives hot winds from the Thar, the average summer temperature is 94° in the shade. The provinces south of the Satpura range are generally cooler than the Indus and Ganges basins, because of their greater elevation.

(ii) The east coast is hotter than the west.

(iii) The high interior of Ceylon possesses a cool and refreshing atmosphere. In the hot season, especially from March to May, the heat on the Deccan is greater than on the coast; but, as it is much drier, it is much less oppressive.

(iv) The rainfall in parts of India is larger than on any other part of the earth's surface. The rainfall which comes with the south-west monsoon is something enormous. On the Malabar coast as much as 480 inches a year has been known; in the caldron-like valley of Assam more than 800 inches.

(v) Up and down the great Indo-Gangetic valley, at different seasons, sweep the monsoons, at right angles to their usual course. Thus moisture brought from the Bay of Bengal may fall as rain on the Western Himalayas.

**13. Vegetation.**—Most of India lies within the tropics; but, with many different climates, it has also many different floras. The dripping hills of Assam and the steaming swamps of the Terai give the most luxuriant tropical vegetation; the dry lands of the Scinde produce a flora like that of Arabia; the elevated lands grow the trees and grains of the Temperate Zone. If we look at the Indian flora from the point of view of altitude, we shall find—from the foot of the Himalayas to the snow-line—the whole gamut of vegetable life, from tropical, through sub-tropical plants, up to the lichens and mosses of Arctic climates. The flora of India may hence be conveniently divided into the flora of the **hills**; of the **plains**; and of the **coast**. The forests on the mountain slopes yield **teak** and **sal**—the most valuable of timbers. They were at one time recklessly burned by wandering tribes; but they are now increasing everywhere under the care of the “Indian Forest Department.” The various **palms**, which supply food, drink, clothing, furniture, and building materials to the natives, grow mostly on the low lands of the coast. The useful **bamboo**, with its light graceful foliage, is found everywhere in the jungle. On the inland plains, the **mango** and the **orange**, the shady **banyan** and the sacred **peepal** are common features in the Indian landscape.

The Terai is the malarious depression at the foot of the Himalayas.

(i) Some geographers give four divisions for the flora of India: (a) the Himalayan Slopes; (b) the almost rainless Basin of the Indus; (c) the drenched Assam; (d) the Deccan Peninsula, which is the part of India with the smallest extremes.

(ii) The banyan or Indian fig grows to an enormous size. One of these trees is said to cover four acres of ground, and to be able to give shelter to an army. The deodar (the “Tree of the Gods”), an immense cedar, flourishes on the Himalayan slopes.

(iii) In the hotter parts of India, pepper, cinnamon, oil-seeds, cotton, indigo, sugar, are largely grown. These tropical products are produced in great quantity ; but their quality is inferior.

(iv) The flora of the Khasia Hills, in Assam, is the richest in India—perhaps in the whole of Asia : and it includes no fewer than 250 species of orchids alone.

(v) The cocoa-nut palm and the bamboo supply the natives of the plains with almost everything they want—including food, oil, rope, and timber.

14. **Animals.**—The tiger and leopard ; the elephant and rhinoceros ; the maneless lion ; the panther and the cheetah, the hyena, the jackal, and the wolf ; bears of different colours ; boars and buffaloes ; deer of various kinds ; the buffalo and the wild ass ; and many kinds of monkeys—are all encountered in different parts of India. There are also many kinds of dangerous serpents. Among the domestic animals, the most important are the camel, the zebu or humped ox, the yak, and the goat of Cashmere. There are countless species of birds. The eagle and pheasant are found in the Himalayas. Partridges and quails are abundant in the plains. Snipe, all kinds of waterfowl (including wild geese), are found in marshy land and on the banks of lakes. The crow is common in all parts of India, but the raven is seldom seen.

(i) The “**Royal Bengal Tiger**” is the “king of beasts” in India. He has preserved his empire in every part of India. He attacks chiefly gazelles, antelopes, wild boars, and often man himself. One “man-eater” is said to have devoured 80 human beings every year. One of these beasts stopped public roads, caused thirteen villages to be deserted, and an area of about 260 square miles to be left untilled.

(ii) The **Wild Goat** (or ibex), and the wild sheep, are found only on the higher slopes of the Himalayas.

(iii) The **elephant** holds his own in the swamps and jungles of Assam and the Terai. The **rhinoceros** plunges about in the muddy regions of the Sunderbunds. The **leopard** (commonly called “panther”) is more daring even than the tiger, and also feeds on human flesh. The **lion**, nearly extinct, is still found in Kathiawar, Guzerat.

(iv) The **monkeys** are tame ; and are regarded as sacred.

(v) The most widely spread serpent is the **cobra da capello** ; and the tiger and the cobra, with other snakes, account between them for the death of about 25,000 human beings every year. Tigers and panthers are responsible for the death of over 69,000 cattle yearly in the British provinces alone.

(vi) The **crocodile** and the **gavial** (another huge saurian) are found in the Ganges.

(vii) There are two kinds of **vultures**, both “scavengers,” keeping the streets clear of offal ; and, from their grave manner, they are known as “philosophers” and “adjutants.” (The proper “adjutant bird” is a kind of crane.)

(viii) But the chief plague of India is found in the clouds of locusts, the legions of rats, the hordes of ants, and the hosts of microscopic creatures which prey upon the crops. "Clouds of locusts appear, and leave no traces of green behind them."

"Strings of ponies and mules struggle with their burdens along the sides of the Himalayas, on narrow pathways which are at many places mere ledges. The hillmen and their hard-working wives load themselves with pine stems and conical baskets of grain. . . . The little yak-cow, whose bushy tail is made in Europe into lace, toils patiently up the steepest gorges with a heavy burden on her back. The sheep, laden with bags of borax, are driven to marts near the plains, where they are shorn of their wool, and then return to the interior with a load of grain or salt. Hundreds of them, after their journey from the upper ranges, are sold for slaughter at a shilling a head; as they are not worth taking back to the inner mountains."

**15. Minerals.**—India is comparatively poor in minerals. It has a good deal of **coal**, but the coal is poor in quality. There is a good deal in Western Bengal; some in the Satpura Range; and a little in the Deccan. It also mines **gold**, **manganese**, and **salt**. The most extensively worked mineral is **salt**, which the Government keeps in its own hands. **Diamonds** are found in some districts; and **petroleum** is largely produced in Burmah.

(i) "There are beds of iron-ore and limestone, which hold out the possibility of a new era of enterprise to India in the future."—TEMPLE.

(ii) The output of the coal-mines in India for 1911 was 12,715,000 tons. The coal is not much used for domestic purposes, but by railways, steamers, and factories.

(iii) There are important ruby mines in Burmah, near the Irrawaddi.

**16. Industries.**—The most important industry in India is **agriculture**. More than two-thirds of the adult males of India are engaged in this pursuit. The Hindus have always been skilful weavers; but this, with other native industries, is dying out. The chief grains grown are **millet**, **maize**, **rice**, and **wheat**; the chief fibres **cotton** and **jute**; while **opium** and **indigo**, **tobacco**, **tea**, **coffee**, and **cinchona**, **sugar-cane**, **spices**, and other plants, are largely grown.

(i) **Millet**, "crops of which run in red ribbons down the hillsides," is the cheapest food; **rice** is the food of the inhabitants of the Ganges Basin, but most of it is grown for export. North of the line of lat. 25° North, millets and wheat are grown, not rice. In the delta, rice is the staple crop and the universal diet. In a single district—**Rangpur**—295 separate kinds of rice are known to the peasant. But, "taking India as a whole, the staple food-grain is neither rice nor wheat, but millet, which is probably the most prolific grain in the world." Millet and maize are the staple foods for the stronger races.

(ii) **Cotton** is grown largely in the fertile "Black Lands" or "Cotton Lands" of the Deccan; in the Madras Presidency; and in the North-West Provinces (especially in the Dooab between the Ganges and the Jumna). "**Jute** is essentially a crop of the Delta, and would exhaust any soil not fertilised by river floods."

(iii) The cultivation of the **poppy** for making **opium** is restricted by the Government to certain parts ; and a duty of several millions is annually raised on it.

(iv) **Indigo** is grown throughout the valley of the Ganges from Dacca in Eastern Bengal up to Delhi. "It is the foremost staple grown by European capital."

(v) **Tea** thrives in Assam, where it grows wild ; but the management of the plantations has been improving every year for the last twenty years, and Assam now sends enormous quantities to England. Tea is also grown on the hill-ranges that skirt the plains of the north-west. **Coffee** is cultivated in the south of the Deccan and in Ceylon. The **Cinchona** tree thrives on the sides of the Nilgherries.

(vi) The cotton, rice, sugar, and tobacco of India are much inferior to those of North America. The maize, wheat, fruit, and vegetables are also inferior to similar growths in Europe. But India surpasses all other countries in indigo, jute, opium, and tea.

**17. Manufactures.**—**Cotton-spinning** and weaving are carried on in the Bombay Presidency ; and there are **jute** factories in Bengal. But the native manufactures of India are, in general, on a small scale ; and Indian artisans have always been celebrated for the delicacy and beauty of their workmanship—especially in gold, steel, and ivory. But whereas, in the last century, cotton goods were sent from India to England, the process is now reversed.

(i) "The organisation of Hindu society demands that the necessary arts, such as those of the weaver, the potter, and the smith, should be practised in every village."

(ii) "The development of cotton manufactures in India during recent years has been of vital importance to the teeming populations of many overcrowded agricultural districts, whose surplus finds profitable employment between the 87,000 looms and the 6 million spindles of 250 mills, employing 240,000 hands, with a capital of ten millions sterling, paying excellent dividends, few earning less than 6 per cent. Twenty years ago there were only 400,000 spindles in all India."

(iii) "Millowners are firmly convinced that it is only a question of a very few years before Manchester will be cut out of the India and China markets. So far as regards coarse numbers, the Bombay spinners of cotton yarns have virtually driven Lancashire clean out of India, Japan, and China. Efforts are constantly being made to produce finer numbers, and every year shows fresh encroachments on Lancashire. During the five years 1880-84 the total exports of twist and yarn from India were valued at £7,800,000 ; during the following five years, 1885-89, they mounted to a total of £18,230,000, or an increase of about 230 per cent. There has also been a substantial increase in manufactured cotton goods over the same periods, from £9,700,000 to £12,440,000. An examination of the imports into India shows a marked contrast. Over the same periods, cotton twists and yarns only increased 5 per cent. from £16,500,000 to £17,180,000 ; manufactured goods, from 104 millions to 120 millions. The Indian millowners have, therefore, raised their imports of yarn and twist to a higher figure than the entire imports, and have practically closed the ports of India to all coarse numbers from Lancashire."—CAINE.



(iv) "Our government of India, giving absolute peace to the peninsula, and raising her credit to a point which provides her with capital as cheap as is enjoyed by the wealthiest of the continental countries of Europe, has made Bombay a great manufacturing city, and Indian mills have doubled their production in the last ten years. That which has happened with regard to coarse cotton goods at Bombay, will happen also as regards iron-smelting, and very possibly as regards many classes of manufactures. India has cheap labour and cheap raw material, and, as regards the markets of the farther East, less distance to face than has Great Britain in placing the goods produced in the customer's hands."

**18. Commerce.**—The commerce of India is very large ; and it has been steadily growing under British rule. Within the last 30 years the external trade has quadrupled. The foreign trade amounts to over £275,000,000 ; and the coasting trade is valued at over £63,000,000. The chief trade is done with Great Britain, China, France, Germany, and the United States. The yearly exports<sup>1</sup> amount to over £164,000,000 ; and the imports<sup>1</sup> to more than £111,000,000. The exports of the first class are **oil-seeds, wheat and flour, raw cotton, rice, raw jute, jute manufactures, hides and skins, tea, cotton yarns and cloth** ; rice is the highest, and cottons the lowest of these. In the second class of exports come opium, pulse, millets, wool, lac, coffee, spices, and oils. The import of the first class is **cotton manufactures** (which amounted in 1913 to over £37,000,000) ; after these, but a long way after, come, in the second class, **metals, hardware, sugar, mineral oil, and machinery**. Broadly speaking, therefore, India sends away raw materials and food, and imports the manufactures which her insufficient supplies of coal and iron prevent her providing for herself.

(i) "The general expansion of trade is explained by the extension of roads, railways, and canals, the improvement of seaports, the increase of the cultivated area, and the abolition of internal and external customs duties."—MARTIN.

(ii) "Bombay and Calcutta may be called the two centres of collection and distribution, to a degree without a parallel in other countries."

(iii) "The India of antiquity was a dealer in curiosities ; the India of the East India Company was a retail dealer in luxuries ; the India of the Queen is a wholesale producer of staples with an enormous export business."—HUNTER.

(iv) "Ten years ago opium was by far the largest Indian export. Now raw cotton has passed it in the list. Again, while ten years ago the export of all the grains together was inferior to that of opium, rice alone is now nearly double opium export. The trade in cinchona, in jute, and in tea, has increased with rapidity equal to the rise in the wheat trade, and is very large. Although, in tea, India is now meeting with a serious competitor in Ceylon, the trade in tea from China to England is dwindling."

<sup>1</sup> Excluding Treasure (1912-13).



(vi) In 1913 the United Kingdom sent India 63 per cent. of her imports, but took only a quarter of her exports. The goods bought by us are chiefly—in the order of their importance—tea, jute, hides, oil-seeds, rice, cotton, wool, and indigo. The goods we sell are—in the same order: cotton manufactures, iron and steel, machinery, woollens, hardware, and railway plant. The value of the cotton goods we sell to India is more than double all the rest put together.

**19. Cities.**—India possesses, in addition to over half-a-million rural villages, seventy-eight cities and towns with more than 50,000 inhabitants. Of these, twenty-nine have more than 100,000. The seven largest cities are **Calcutta, Bombay, Madras, Hyderabad, Rangoon** (p. 154), **Lucknow, and Delhi.**

There are more than thirteen hundred towns which have a population of about 10,000.

(i) **Calcutta** (1,222), once the capital of the Empire of India till the central seat of the British Government was transferred to Delhi in 1911, stands on the Hooghly, which is the largest and most westerly branch of the Ganges Delta. Its splendid buildings have given it the name of the "City of Palaces." The winding waters, the varied foliage, the amphitheatre of magnificent edifices, the forest of masts that look in on the city, all make up a very imposing picture. Calcutta is one of the great ports of Asia. It is also the second largest city in the British Empire.

The longitude of Calcutta is 88° East. When it is 6 P.M. at Calcutta, it is noon in London, and 7 A.M. in New York.

(ii) **Bombay** (980), the capital of the Presidency of Bombay, stands on a small island which is connected with the mainland by an artificial causeway. It is the largest and safest harbour in India, and one of the great seaports of the world. It occupies the best position for commerce in the whole of Asia; and, since the opening of the Suez Canal, it has been rapidly surpassing Calcutta in its trade. It has constructed some of the noblest docks in the world. It was the American war of 1861-65 that made the fortune of Bombay; for it then became the chief cotton mart of the globe. Its streets are thronged with people of every race, tongue, and colour. Among the chief merchants are the Parsees, who are fire-worshippers. (The name is a contraction of *Bom Bahia*, the Portuguese for "Good Bay." It came to England as part of the dowry of Catherine of Braganza daughter of the King of Portugal, and wife of Charles II. The East India Company received it from Charles for a rent of £10 a year.)—On the neighbouring islands of Salsette and Elephanta are the remains of wonderful temples hollowed out in the native rock. On the table-land east of Bombay stands the city of **Poonah**, the chief station between Bombay and Madras.

"In Bombay, as in Lancashire, 'Cotton is King.' The boats plying in the harbour, the wharves of the splendid docks, the picturesque bullock-carts that throng the streets, are all 'cotton.' After New Orleans, Bombay is the greatest cotton port in the world; four million cwts. are shipped abroad every year, and two millions more are spun and woven in the eighty-two mills of the Bombay Presidency—the value of all this cotton is about twelve millions sterling. The old Cotton Green, a vast space devoted to dealers in the raw material, is one of the show places of the city, and forms a striking picture of busy native life

(iii) **Madras** (520), the capital of the Presidency of Madras, is the third largest town in India, and the third seaport in rank. It stands on—or rather stretches for

eight miles long—a surf-beaten shore, exposed for months together to the full fury of the north-east monsoons. The houses are blindingly white. An artificial harbour and piers have now been built, which enables vessels to come up and discharge their cargoes. The summer capital of the Presidency is **Ootacamund** (7000 feet above the sea) in the Nilgherries : just as Simla is the summer capital of Bengal.

(iv) **Hyderabad** (500) is the capital of the Nizam's Dominions, in the Deccan. It is the largest city in the Deccan ; and a great railway centre. It is a Moslem rather than a Hindu city ; and the streets are crowded with Arabs, Afghans, and Rohillas. It is naturally and strongly fortified by a belt of desert borderland—on which lies a mighty chaos of granite rocks ; and this belt is in some places 18 miles wide. The city is built on a small plain. Not far from the city stands **Golconda**, the former capital of the kingdom. Diamonds used to be polished at Golconda ; but the diamond mines were at **Karnul**.

(v) **Lucknow** (260) is the capital of the former kingdom of Oude, now in the United Provinces. It is a magnificent city, full of palatial structures ; but to Englishmen it is most memorable for the stubborn defence by Lawrence in the mutiny of 1857, and its gallant relief by Havelock. **Cawnpore** (197) was, in the same war, the scene of a terrible massacre of British women and children.

(vi) **Delhi** (232), on the Jumna, was for centuries the proud capital of the Great Mogul, and became in 1911 once more a capital—of our Indian Empire. Delhi is the true centre of India, for all the great historic roads cross there ; it is also the railway centre for Northern India, and the chief trade-focus within the triangle formed by Bombay, Peshawur, and Calcutta. Having been the seat of the Mogul court, Delhi retains the old court industries of wood-carving, filigree work, and shawl-weaving, to which it adds the modern industries of iron-founding, brush-making, and flour-milling (for it does a large trade in wheat).

**20. Historic Towns.**—India has experienced so many vicissitudes, been overrun by so many conquerors, has seen the rise and fall of so many empires and kingdoms, that it is full of places which have left their mark in history and which still retain the memories of past and departed greatness. The most important of these towns are **Benares**, **Patna**, **Agra**, **Amritsar**, **Lahore**, **Allahabad**, **Jeypore**, **Meerut**, **Nagpore**, **Trichinopoly**, **Peshawur**, **Dacca**, **Jubbulpore**, **Indore**, **Umballa**, **Calicut**, and **Surat**. Most of these cities stand in the Ganges-Jumna valley ; and no region in the world presents such an array of splendid and famous cities.

(i) **Benares** (203), on the Ganges, is the “Holy City” of the Hindu Brahmans. It is crowded with palaces and Hindu temples ; and the countless palaces, temples, towers, mosques, cones, spires, cupolas, minarets, porticoes, sanctuaries, flights of steps to the river—with the altars, shrines, statues, and images set up at the corner of every street—make up the most characteristic scenes in the whole of India. It is the centre of Hindu learning. The interior is a labyrinth of narrow winding streets, where one is jostled and hustled by crowds of pack animals, camels, horses, asses,

and sacred bulls, while monkeys chatter from the balconies. The "ghats," or flights of steps to the river, are crowded with pilgrims and fakirs, many of them performing their ablutions in the sacred stream.

(ii) **Patna** (134), on the Ganges, is an old Moslem town. But at present it is one of the chief trading centres of India; makes up and exports opium; sells rice; and its warehouses stretch for 12 miles along the banks of the river. Near it is **Gaya**, the birthplace of Sakya Mouni (surnamed Buddha, or "the Enlightened"), the founder of Buddhism. Here he sat for five years in the shade of a banyan, absorbed in contemplation. Hence, for Buddhists, Gaya is the "Holy City."

(iii) **Agra** (188), on the Jumna, is celebrated for the exquisite and indeed perfect beauty of the Taj-Mahal—an edifice erected to the memory of his wife by Shah Jehan at a cost of three millions sterling. Built of pink sandstone and white marble, standing amid the sombre green of cypress-trees, seen in the liquid atmosphere of a moonlight night, it presents a sight that can never be forgotten.

(iv) **Amritsar** (152), in the Punjab, is the sacred metropolis of the religious sect called the Sikhs. Here is the Lake of Immortality and its Golden Temple—one of the most beautiful and elaborate buildings in the world. This city is the entrepôt for goods sent from Calcutta and Bombay to Cashmere and other markets of Central Asia. During the great feasts the city becomes a chromatic frenzy of colour; the streets being hung with shawls, carpets, curtains, and banners of every kind.

(v) **Lahore** (228), on the Ravee, in the richest of the dooabs, is the capital of the Punjab, and the administrative and railway centre of the North-West Provinces.

(vi) **Allahabad** (172), at the confluence of the Ganges and the Jumna, midway between Calcutta and Bombay on the East Indian Railway, and lying on the Grand Trunk Road, is the centre of a busy commerce. (The name means "Abode of God.")

(vii) **Jeypore** (137), the capital of Jeypore—one of the twenty Native States in "Rajputana,"—on a plateau east of the Thar, calls itself the "Paris of India," and is one of the finest towns between the Indus and the Ganges.

(viii) **Meerut** (118), in the dooab between the Ganges and the Jumna, is celebrated as the town where the Sepoy Mutiny of 1857 broke out.

(ix) **Nagpore** (101) is the most important town in the Central Provinces. It was one of the chief towns of the old Mahratta Kingdom.

(x) **Trichinopoly** (122), the largest city south of Madras,<sup>1</sup> stands at the head of the Cauvery Delta, the Garden of Southern India. It is commanded by a strong fort, perched on a steep granite peak; and bloody were the struggles between the British and French in the eighteenth century to keep possession of it.

(xi) **Peshawur** (95), on the Cabul River, above where it joins the Indus, and opposite the mouth of the Khyber Pass, is the bulwark of the Indian Empire against Afghanistan.

(xii) **Dacca** (108), on a tributary of the Brahmapootra, was once the capital of Bengal, and the centre of the Mohammedan world in Eastern India. The ruins of its palaces are scattered over the surrounding jungle.

<sup>1</sup> **Madura** (134), which lies south of Trichinopoly, was found in the last census to have surpassed Trichinopoly in population.

(xiii) **Jubbulpore**(100), in the Central Provinces, is the chief town in the valley of the Upper Nerbudda. It stands on the main line of railway between Calcutta and Bombay. It stands near the "marble gorge" of the Nerbudda, and in the middle of some of the finest scenery in India.

(xiv) **Indore** (86) is the capital of one of the most powerful Native States on the Malwa Plateau. It is the centre of the opium trade.

(xv) **Umballa** is an important military station. It guards the road between Lahore and Delhi, and is the bulwark of **Simla**, the summer capital of British India, high among the hills of the Sub-Himalaya.

(xvi) **Calicut** is the largest city on the Malabar coast. It was the first Indian seaport visited by Vasco da Gama in 1498. It gives its name to *Calicoes*, but no longer produces them. It exports the gold ores of Wainad, the coffee of the Nilgherries, and the teak of the Western Ghats.

(xvii) **Surat** was in the early days of the East India Company the chief trading-place on the west coast. It gives its name to a coarse kind of cotton.

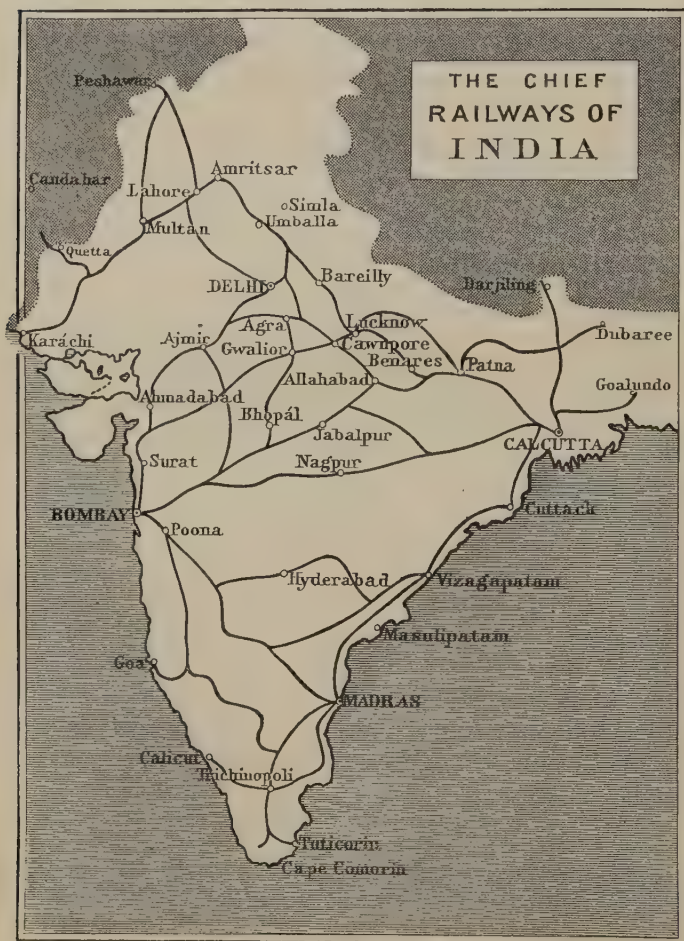
**21. Communications.**—Up to the middle of the 19th century, there were in India few roads, and not a single mile of railway. The roads of the country were footpaths or tracks fit only for ox-wagons; and, except where there were navigable rivers, all burdens had to be carried on the backs of men or of oxen. At the present time, there are over 33,000 miles of railway; 13,000 miles of navigable canal, artificial and natural; 60,000 miles of good road (more than one-third of which is well macadamised and provided with bridges); and 560,000 miles of postal route. There are over 55,000 miles of telegraph lines. Great trunk lines of railway cross the Peninsula, from west to east, at four different parts; and these are again connected by branch lines with all the larger towns. Thus the three great capitals, Calcutta, Bombay, and Madras, are all connected by railways. The highways are magnificently engineered and solidly built, and are noble specimens of skill in their gradients, cuttings, bridges, and embankments. The canals, both for navigation and for irrigation, are splendidly constructed. If, then, we take the water-ways, the railways, and the highroads together, we shall find that the densely peopled parts of India are as well provided with the means of communication as any part of Europe.

(i) The railways of British India give one mile of rail to every 50 sq. miles of area. The longest railway is from **Calcutta to Peshawur**, up the Ganges and Indus valleys. The other railways are carried over the Ghats, over the Vindhya and other ranges, and through the highest passes. Over 200 million passengers travel on them every year.

(ii) Of the 560,000 miles of postal routes, only 20,000 are properly constructed highroads. The longest of them runs from **Calcutta to Peshawur**; and this skilfully

engineered and well-kept road of 1500 miles is one of the wonders of the world, as well as one of the triumphs of British military rule.

(iii) All the great deltas, not only of the Ganges-Brahmapootra and Indus, but of the peninsular rivers, are intersected by numerous water-courses; and the lagoons and backwaters along the coast are of the greatest service to navigation. In addition to the navigation canals, those for irrigation are often used by small craft for hundreds of miles. "In the Gangetic Delta the population are half amphibious. Every village can be reached by water in the rainy season, and every family keeps its boat."





**22. Irrigation.**—There are great uncertainties in the climate of India. Sometimes the monsoon rains fail ; a terrible drought comes on, and widespread famine ensues. Thus irrigation is for the people of India a matter of life and death. The native rulers have always done much to provide against the terrible contingency of famine : the British Government has done more. There are now 31,000 miles of irrigation canals in British India. Canals are led off from all the great rivers—from the Ganges, from the deltas of the Mahanuddy, the Godavery, the Krishna, and the Cauvery. These are works of vast dimensions, and of the highest engineering skill. In the Punjab, large canals are drawn from each of its five rivers ; and, says Sir Richard Temple, “the Indus is to Sindh what the Nile is to Egypt.” In Sindh alone, more than 2,000,000 acres of land are dependent for their supply of moisture on irrigation canals. In addition to these, there are artificial lakes in many districts ; while every small town or village has its tank, and every valley its well. The grand total of the irrigated area in British India is estimated at 28,000,000 acres. Of these, about 13,000,000 acres are watered by irrigation canals.—The opposite disaster of floods occurs sometimes in the lower course of the Indus and in the delta of the Ganges. To restrain and hem in these floods, the British Government have constructed over 1500 miles of embankments.

(i) The British Government spent, in the years from 1874 to 1912, over £41,000,000 in providing food in periods of scarcity.

(ii) “In Sindh, so little rain falls that the country may be said to be rainless. It is the Egypt of India, and without artificial irrigation would be an uninhabitable desert. Bengal, on the other hand, is a country of abundant rain and luxuriant vegetation.”—**STRACHEY.**

**23. Population and Populousness.**—The population of India amounts to about 315,000,000 souls. Of these 244,000,000 are in British India ; and the rest in Native States, which are, in different ways, more or less under the control of the British Government. The average density of the population is 165 to the square mile.

(i) Great Britain has 418 to the square mile ; so that India (including Burmah) has a good deal less than half the density of Great Britain.

(ii) The highest density is in the Ganges Valley, which has an average of 500 to the square mile. In some parts 934 to the square mile are found—and that, too, in districts which are purely agricultural.



(iii) The highest density in the Deccan is found in **Cochin**, a native state in the Presidency of **Madras**, which has 442 to the square mile.

(iv) The plains of the **Ganges** and **Indus** support 170 millions; the remaining 145 millions live in the Deccan and in **Burma**.

(v) In the British provinces, the average density is 211 per square mile; in the Native States, 91.

(vi) Only one-tenth of the people live in towns. In **England**, more than six-tenths of the people live in towns and cities.

**24. Inhabitants.**—"There is scarcely a country in the world which contains a greater diversity of tribes and races in every stage of civilisation, from the cultured European and philosophic Hindu down to the most degraded savages." There are, speaking broadly, two distinct stocks—the **Aryan** (in the Northern Plains), and the **Dravidian** (in the Deccan). The Aryans speak Hindustani, or Bengali; the Dravidians either Telugu or Tamil. But more than a hundred different languages are spoken within the boundaries of India.

(i) About 87 millions of people speak Hindustani; about 44 millions, Bengali; about 20 millions, Telugu; 18 millions, Mahratti; 17 millions, Punjabi; and 16 millions, Tamil.

(ii) The census taken under the head of occupations, which belong by inheritance to castes, includes hereditary hangmen, beggars, drummers, match-makers (of marriages), idol-makers, flatterers, howlers at funerals, poets, etc. etc.

(iii) "What is the genius or leading characteristic of the Indian race? for herein chiefly consists the wealth of India. Their leading characteristic is industry, a desire to improve their condition, willingness to work, in order to create and accumulate wealth. The natives of India travel enormous distances in search of employment. When this is obtained, their one idea is to save money, so as to be able to return to their native village to spend the evening of their lives, thus indicating a wealth-creating and conservative faculty common to all wealthy and civilised countries."—BIRKMYRE.

(iv) The Hindu is a total abstainer. He is also a vegetarian. There are 250 millions of Hindus, who would die rather than eat flesh. The ryot stores in his house grain enough for himself and family for the whole year. Hence he needs no money, and cares not a straw whether prices go up or go down. His wife is his cook, his housemaid, and his charwoman; and she also helps him in his field. He has a small income; but he limits his wants. He cuts his coat according to his cloth, for he has only a waist-cloth round his loins. He has no furniture, not even a hand-basin. He washes in the river or in the tank, and he dries himself in the sun. He has no chair or bed or table: the floor serves for all. But if he is given to luxury, he indulges in a threehalfpenny mat. He has cooking-pots and utensils for keeping grain and water: otherwise his house is completely bare.

"Is there, Hindu, tell me truly, in thy homestead nothing more  
Than some tattles and some bratties and some chatties on the floor?

Quoth the Hindu, 'Nothing more' "

He is easily amused—and cheaply. Six shillings will provide a dramatic entertainment lasting from ten at night to six in the morning, for an audience of thousands of people. The Hindu is a man of perfect simplicity, superhuman patience, and other beautiful virtues.

Tatties=sunscreens. Bratties=dried cow-dung for fuel. Chatties=earthen-pots.

**25. Political Divisions.**—The Governor-General of India resides in Delhi, and is the immediate representative of the British Government, and the Viceroy for the King as Emperor of India. He rules over all India, and also, directly, over some small districts. Under him are the Governor of **Bengal**; the Chief Commissioner of **Assam**; the Lieutenant-Governor of the **United Provinces of Agra and Oude**; the Lieutenant-Governor of the **Punjab**; the Chief Commissioner of the **Central Provinces** (including Nagpore, Jubbulpore, etc.); the Lieutenant-Governor of **Burmah**; the Governor of the Presidency of **Bombay**; the Lieutenant-Governor of **Behar** and **Orissa**; and the Governor of the Presidency of **Madras**. Besides, there are a number of Native States, which are controlled by the British Government; and the most important of these are the **Rajputana Agency**; the **Central Indian Agency**; **Hyderabad**, **Cashmere**, and **Mysore**. In the Himalayas there are two states, **Bhutan** and **Nepaul**, which are independent, but which maintain friendly relations with the British Government.

(i) The map of India is particularly puzzling. The best thing to do is to get hold with the eye of the Native States of **Mysore** and **Hyderabad** in the Deccan; and then of the country called **Rajputana**, which lies to the east of the Thar; and refer all other provinces to these.

(ii) The "Agencies" embrace a large number of small states—each with its own native ruler. There are about 150 Native States; and in each capital resides a British official who is called the "Resident."

(iii) It is the deep-sunk swamp of the Terai—dangerous to cross even on horseback,—that has preserved the independence of **Nepaul** and **Bhutan**.

(iv) The King solemnly proclaimed himself Emperor of India (*Kaiser-i-Hind*) at Delhi—the capital of the old Mogul Empire—on December 12, 1911. The affairs of the country are really managed by a number of Englishmen, Scotchmen, and Irishmen who belong to the Civil Service of India; and many of these young men have under their rule districts containing hundreds of thousands of human beings, "without any check but their own consciences in administering laws of extreme severity."

(v) The Indian army consists of 76,000 European troops, and 159,000 native soldiers. The fortresses and strong points are uniformly held by British troops.

**26. Religions.**—The chief religion of India is **Brahmanism**<sup>1</sup>: it is the religion of two-thirds of the people. In the north, there are

<sup>1</sup> Or **HINDUISM**.

large numbers of **Mohammedans**—over 66 millions. **Buddhism** has almost completely disappeared from the Peninsula, but holds its ground in the Himalayas, Burmah, and in the south of Ceylon. The **Christians** as yet number about three millions.

(i) **Caste** is the chief social feature of Brahmanism. There were originally four castes, the chief being the Brahmins, who are sprung from the head of Brahma himself. But there are now 2500 main divisions of caste; and in Madras alone about 4000 minor distinctions. The two extremes are the Brahmins and the Kanjars. The latter are scavengers; they feed on carrion, dwell in kennels, and once were struck, even killed, with impunity. The former are the “heirs of all things.” A “scale of distance” has been drawn up; and the Kanjar must keep 100 paces from the Brahmin. Before the British rule, death was the penalty for breaking these regulations; for even the shadow of a low-caste man would “pollute” the personage of high-caste. So ingrained is this spirit even now, that a Christian convert “will not sit with the priest by whom he has been converted; and the father closes his door to the son who has travelled abroad, and thereby lost caste.”

“No child is born, named, betrothed, or married; nobody dies or is burnt; no journey is undertaken or lucky day selected; no house is built, no farm-work of importance is begun or harvest gathered in, without the Brahmins being fed or fed.”—IBBETSON.

(ii) Mohammedanism is also called **Islamism**. (*Islam* means “God’s will be done!”)

(iii) Nature-worship, such as the worship of serpents and “evil spirits,” prevails among many of the wild tribes in the hills. Trees, stones of fantastic shapes, useful plants, noxious plants, wild beasts, tame animals, etc. etc., are all objects of worship.

**27. British Provinces.**—The following is a tabular view (excluding Burmah—see pp. 151-6) of the chief territorial divisions in India under the direct rule of Great Britain:—

#### BRITISH PROVINCES

PROVINCES.	POSITION.	CHIEF TOWNS.
1. Bengal . . . .	The Lower Ganges and delta.	Calcutta, Dacca, Howrah.
2. Behar and Orissa .	Between the Ganges and the Mahanuddy delta.	Patna, Cuttack.
3. United Provinces of Agra and Oude	Upper Ganges and Jumna Basins.	Allahabad, Benares, Agra, Cawnpore, Lucknow.
4. Punjab . . . .	The “Five Rivers” Basin.	Lahore, Multan, Simla (DELHI).
5. North-West Frontier Province	North-West Frontier.	Peshawur.
6. Central Provinces	Northern part of Deccan, between the Nerbudda and the Godavery.	Nagpore, Jubbulpore.
7. Bombay . . . .	Western India, from Beluchistan to Mysore.	Bombay, Surat, Poona, Karachi, Hyderabad.
8. Madras . . . .	South-eastern India, from Lake Chilka to Cape Comorin.	Madras, Trichinopoly, Madura.
9. Assam . . . .	Lower Brahmapootra Basin.	Shillong.

(i) **Bengal** is part of the great alluvial plain of the Lower Ganges. It also includes the delta of the Ganges-Brahmapootra "with its thousand mouths."

(ii) **Behar and Orissa**, between the Middle Ganges and the Mahanuddy delta, up to 1912 formed part of Bengal. It is in the highlands of Chota Nagpore in this province that India's chief coal-mines lie.

(iii) The **United Provinces of Agra and Oude** comprise the alluvial plains of the Upper Ganges and the Jumna. Oude is one of the most populous parts of the globe. The district between the Ganges and the Jumna is called the **Dooab**.

(iv) The **Punjab** consists mostly of the basins of the Upper Indus, but also embraces a part of the Ganges Basin. The tracts along the rivers are fertile; but the "dooabs" are often mere wildernesses of scrub and jungle. Between the Punjab and Afghanistan stretches the **North-West Frontier Province** constituted in 1901.

*Ab* in *Punjab* and *Dooab* is the same as *av* in our *Avon*, and means *water*. *Punj* means *five*; and is the same word as our *punch*—a drink of five ingredients,—the Greek *pente*, the English *five*. *Doo* is the same word as our *two*.

(v) The **Central Provinces** form an irregular square which embraces the upper courses of the Nerbudda and the Mahanuddy.

(vi) The **Bombay Presidency** stretches from the Punjab and Beluchistan southwards to Mysore, for a distance of 1100 miles. It is about as large as the U.K. The largest of the Native States in this province are **Cutch and Baroda**, in the country called **Gujerat**. The country on the Lower Indus is called **Sindh**.

(vii) The **Madras Presidency** stretches from the Chilka Lake to Cape Comorin, includes the whole of the Eastern, and a large part of the Western Ghats. It includes the old provinces of the **Carnatic, Malabar**, etc. It is 1000 miles long; and its area is larger than that of Prussia.

(viii) **Assam Proper** is an extensive alluvial plain along the Brahmapootra. It includes, also, ranges of hills, the chief of which is the Khasia Range. The rainfall here, owing to the moisture-laden winds from the south being heaped in a narrow valley, is the largest in the world. **Chirapoonjee** has had a rainfall of 815 inches.

**28. Native States.**—The following is a tabular view of the chief Native States which are more or less subject to the authority of Great Britain :—

#### NATIVE STATES

STATES.	POSITION.	CHIEF TOWNS.
1. <b>Cashmere</b> . . . .	North of the Punjab. Among the Himalayas.	Srinagar, Jammu.
2. <b>Rajputana</b> . . . .	The general name for 20 States east of the Lower Indus.	Jeypore, Jodpore (capitals of two).
3. <b>Central India or Indore Agency.</b>	64 States between Rajputana and the Central Provinces. The largest are Scindia's Dominions and Holkar's Dominions.	Gwalior, Indore.

STATES.	POSITION.	CHIEF TOWNS
4. <i>Gujerat</i> . . . . .	Between the Gulfs of Cutch and Cambay.	<i>Baroda</i> .
5. <i>Hyderabad</i> or the <i>Nizam's Dominions</i> .	Between the Central Provinces and the Presidency of Madras.	<i>Hyderabad, Aurungabad</i> .
6. <i>Mysore</i> . . . . .	South of the Krishna.	<i>Bangalore, Mysore</i> .
7. <i>Travancore</i> . . . . .	South-West of Madras Presidency.	<i>Trivandrum</i> .

**Nepaul** and **Bhutan** are Independent States in the Himalayas, but have treaties with the British Government.

(i) **Cashmere** lies in the basin of the Upper Indus among the Himalayas—"in the grandest alpine region:" it is one of the loveliest spots in the whole world. The Vale of Cashmere is hemmed in on all sides by snow-clad peaks, and is watered by the Jhelum, which forms in its course Lake Woolar and other beautiful lakes. The snowy peaks, the romantic gorges, the calm lakes—which reflect the trees, mountains, and sky—the clear streams with their rapids and waterfalls, the magnificent woods, the meads thickly bespangled with flowers, the absence of wind, and the perpetual spring, all go to make up the ideal of an earthly Eden. The capital is **Srinagar** (126), an "Indian Venice," intersected by canals, which are enlivened by boats gliding in all directions. The houses have gardens on the roof, which are always bright with flowers.

(ii) **Rajputana** lies in the north-west of India, and is the name of a wide region, in which lie 20 Native States, ruled by Rajahs. Although larger than the United Kingdom, its population is little more than 10,000,000. The Aravulli Range runs through the centre of this region, and the Thar Desert lies in the west. The chief British Agent, who regulates all these states, resides at **Ajmere**—a small territory under the direct rule of the Viceroy. The three largest Rajput States are **Jodpore**, **Oodeypore**, and **Jeypore**.

(iii) The **Central India** or **Indore Agency** lies between Rajputana and the British Central Provinces. It comprises 64 Feudatory States. The largest is **Gwalior**, which is governed by the Maharajah (= "Great Rajah or Emperor") Scindia; but the British Agent resides at Indore, the capital of the dominions of the Maharajah Holkar. **Gwalior** is a typical Indian fortress. A sandstone rock about a mile and a half long, whose steep white cliffs rise boldly out of the verdure and the small mud dwellings of the plain, commands the whole country for 60 miles in every direction. This stronghold has been fought for, over and over again, by the different masters of India. It was twice stormed by the British; and it is now one of the strongest positions in all India.

(iv) **Gujerat** is a rich alluvial country, which comprises the states of **Kathiawar**, **Cutch** and **Baroda**. The sovereign of Baroda is called the **Gulcower** (or "Cowherd").

(v) **Hyderabad** (or the **Nizam's Dominions**) is by far the largest and most important Native State in all India. It lies in the heart of the Deccan and is extremely fertile. From the diamond-fields of the Krishna Valley have come many famous gems, such as the "**Koh-i-noor**" (Mountain of Light). The capital is **Hyderabad** (there is another Hyderabad in Sindh, near the head of the Indus Delta). Not far from Aurungabad

stands the little town of **Assaye**, near which Sir Arthur Wellesley (afterwards the Duke of Wellington) gained a great victory over the Mahrattas in 1803.

(vi) **Mysore** consists of an extensive table-land a little more than half the size of England. The surface is dotted over with remarkable rocks, called **Droogs** (= "Inaccessible")—isolated bluffs, formerly marine islands, which look "like hay-cocks scattered over the surface of a meadow." Some of them rise to the height of 1600 feet, and can only be scaled by steps cut in the rock. Many have perennial springs on the top; and are thus impregnable strongholds, framed by Nature.

(vii) **Travancore** is a state on the south-western coast. Most of it is covered with forest; but the low lands on the coast are very fertile. Round Trivandrum is a vast district which grows about 22,000,000 palm-trees—palmyra, cocoa-nut, and others. Beside Travancore is **Cochin**, another small Native State. The capital is **Cochin** (= "Little Port"). "Here Vasco da Gama died in 1525; here was built the first European church: and here was printed the first book in India."

(viii) **Nepaul**, the native country of the warlike Ghoorkas, is a narrow mountain-state among the Himalayas. **Khatmandu** is the capital, and the key to the chief passes across the Himalayan range. Though independent, Nepaul has to receive a British Resident. **Sikkim**, a small Feudatory State, lies to the east. It is a British protectorate; a trade-route between Bengal and Tibet passes through it.

(ix) **Bhutan** is another state in the Himalayas, with some of the grandest scenery.

**29. Chief Ports.**—The largest ports of India are **Calcutta**, **Chittagong**, **Bombay**, **Madras**, **Karachi**, and **Rangoon** (see p. 154). They carry on nineteen-twentieths of the foreign sea-borne trade of India.

(i) **Calcutta**, the outlet for the great alluvial plain of Bengal, is the chief port for tea, indigo, opium, rice, and jute. **Chittagong**, in the newly constituted Province of Eastern Bengal and Assam, has taken from Calcutta much of the tea and timber trade of the Eastern part of the Brahmapootra valley. It is joined by rail, up the Cachar Valley, to Sibsagar in the N.E.

(ii) **Bombay** is the cotton-port of India. It also exports oil-seeds, wheat, and opium. Its island-harbour is the best in the whole country.

(iii) **Madras** exports cotton, teak from the Western Ghats, and sugar. It has only an open roadstead.

(iv) **Karachi** (151), on the Indus Delta, exports wheat especially, also oil-seeds, hides, wool, and cotton.

#### THE SPELLING OF INDIAN NAMES.

The spelling of Indian names has been greatly altered lately, and the old-fashioned spelling is destined to die out. The spelling in the text is that which is most usual; but it is as well to make ourselves acquainted with both forms. In the new spelling, **a** replaces **u**; and **u** the old-fashioned **o**.

NEW SPELLING.	OLD SPELLING.	NEW SPELLING.	OLD SPELLING.
Panjab.	Punjaub.	Lakhnau.	Lucknow.
Atak.	Attock.	Jaipur.	Jeypore.
Jamna.	Jumna.	Maisur.	Mysore.
Rann of Kachh.	Runn of Cutch.	Arkat.	Arcot.
Banaras.	Benares.	Karachi.	Kurachee.
Kanhpur.	Cawnpore.	Haidarabad.	Hyderabad.
Bangalur.	Bangalore.	Jabalpur.	Jubbulpore.



### THE CONDITION OF INDIA

#### 1. Area (including Native States and Burmah), 1,766,797 sq. miles

The area of the British Territory is 1,087,404 sq. miles (including Burmah 236,738 sq. miles); that of the Native States 679,393 sq. miles.

#### 2. Population (total) . . . . . 315,132,537

Of this number 231,898,807 live in British Territory (10,489,924 in Burmah), and 62,461,549 in the Native States.

#### 3. Exports 1913 (excluding treasure) . . . . £164,000,000

Principal exports (chiefly *raw materials*):—

Rice . . . . £21,700,000	Seeds . . . . £15,000,000	Cotton yarns } £8,000,000
Cotton (raw) 18,741,000	Wheat and flour 12,500,000	and cloth . }
Jute (raw) . 18,000,000	Hides and skins 10,914,000	Opium . . . 7,481,000
Jute manu- } 15,247,000	Tea . . . . . 8,863,000	Pulse, millets, etc. 5,982,000
factures . }		Wool . . . . 1,756,000

#### 4. Imports 1913 (excluding treasure) . . . . £111,000,000

Cotton manufactures (over £37,000,000) are by far the most important of the imports.

#### 5. Manufactures . . . . . Rapidly increasing

The first cotton-mill in India was started in 1851. In 1912 there were 258 mills at work, which supplied India with practically all the low-count yarns it required. Both the cotton and the jute mills (59 in 1912) of India are formidable competitors with British factories.

#### 6. Trade with Great Britain . . . . . £235,000,000

(i) Thus out of India's total foreign trade (£268,000,000 in 1913) Great Britain alone absorbed more than 88 per cent.

(ii) Great Britain re-exports a large quantity of her imports from India, notably cotton, rice, jute, and tea.

#### 7. Communications (internal) . . . . . Excellent

(i) There were in 1912 33,484 miles of railway open.

(ii) India possesses over 55,000 miles of telegraph line.

#### 8. Communications (external) . . . . . Excellent

The steamers of the great lines (especially the British India and P. and O.) call regularly at the great ports of Calcutta, Bombay, Karachi, Madras, and Rangoon.

NOTE.—The rate of exchange for the rupee is 15 to £1 sterling.



## BURMAH

MANDALAY.—LATITUDE 22° 0' N.

Hongkong, Calcutta, Muscat, Mecca, Havanna, Mazatlan.

LONGITUDE 96° 15' E. Time 6.20 P.M.

1. **Introductory.**—**Burmah** is the largest of all the provinces in British India. It stretches from the confines of Tibet to Lower Siam—from 28° North latitude down to within 10° North latitude. It has an area of 236,000 square miles—almost exactly the same size as **Austria-Hungary**.

(i) About one-third of this area belongs to the old province of Lower **Burmah** or “**British Burmah**,” as it was called to distinguish it from Upper **Burmah**, which, till 1886, was independent and under the rule of a native king.

(ii) There are five well-marked divisions in **Burmah**: (a) the basin of the **Irrawaddi**; (b) the basin of the **Sittang**; (c) parts of the basins of the **Salween** and the **Mekong** (in its upper course); (d) the narrow maritime province of **Aracan**, in the north; and (e) the maritime province of **Tenasserim** in the south.

2. **Build.**—Most of **Burmah** is very mountainous; and there are only 50,000 square miles of level cultivable plain—chiefly on the lower courses of the rivers. Most of the country is hilly and rugged, covered with forests; and the highland tracts range from 2000 feet to 4000 feet above the level of the sea. The **Patkoi Mountains** are the highest range; and one of their peaks rises to a height of 12,000 feet. The secondary ranges are the **Aracan Yoma Range**, which separates the basin of the **Irrawaddi** from the **Aracan** district; and the **Pegu Yoma**, which separates the basin of the **Sittang** from that of the **Irrawaddi**.

(i) The **Irrawaddi** is now one of the great commercial highways of the world. It is navigable for 900 miles, beyond **Bhamo**, and within 50 miles of the Chinese frontier. The countless channels of its delta are also covered with steamers which ply between the many towns on its banks. At **Prome** it is a mile wide.

(ii) The **Salween** is navigable for only 80 miles.

(iii) The **Irrawaddi** is subject to the greatest fluctuations in the volume of its waters. In August, just after the rainy monsoon, it sends to the ocean 17 times as much water as during the dry season in February. It is sometimes as small as the **Rhine**; and sometimes as large as the **Congo**. Its mean discharge is said to be about the same as that of the **Ganges**.

**3. Climate.**—The climate and rainfall necessarily vary with the height of the land above the sea-level. Most of Burmah lies in the tropics, and except in the central districts of Upper Burmah which are sheltered from the rain-bearing winds and therefore dry, the general climate is hot and damp. On the hills to the north and east the climate is temperate. There is a very wet area on the west and round the Irrawaddi delta, which receives the full force of the rainy south-west monsoon. On the other hand, east of the Aracan Yomas and west of the Shan hills lies the “Deccan” of Burmah, a dry district and the only part of the country where famine sometimes occurs.

**4. Vegetation.**—The fertile soil and the moist climate almost everywhere produce a rich vegetation. The forests contain an enormous number of trees which are both useful (as cabinet and as dye woods) and beautiful. Of these, the **teak** and the **bamboo** are the most valuable. Orchids, ferns, and mosses of remarkable beauty grow in abundance among the underwood; and a Burmese forest in March is brilliant with varieties of striking colours, and sweet with stimulating scents.

(i) Some **teaks** are 25 ft. in girth, and grow to the height of 120 ft. without a single lateral branch.

(ii) The **giant bamboo** is 9 inches thick and 100 ft. high.

(iii) The forests are much frequented by creepers. There are flowering creepers; creepers which yield valuable fibres; and creepers which yield india-rubber or gums.

(iv) The forests are found chiefly in the hill-country, while the flat delta lands of Lower Burmah are renowned for their production of **rice**.

**5. Animals.**—The forests of Burmah give food and shelter to the **elephant**, the **tiger**, the **leopard**, the **bear**, and other carnivorous animals. The **rhinoceros**—three species—is found in the rivers. The **tapir**, the **buffalo**, different kinds of **deer** and wild **oxen**, are also found in different parts of this vast and rich country. There is an immense variety of birds. The waters of the rivers and round the coasts abound in fish. Deadly snakes—**pythons** and **cobras**—are not uncommon.

(i) The **peacocks** of Burmah are the largest and most beautiful in the world. There is the **argus pheasant** as well as the golden and the silver pheasant. Water birds, from the pelican and wild goose down to the snipe, are seen in immense numbers.

(ii) The Burmese are very fond of fish and eat whatever they can catch—from the shark down to the sea-slug.

(iii) The loss of life and property by wild animals and snakes in Burma is very considerable. In the year 1900, 1017 human beings and 11,846 cattle were killed by snakes and by tigers, leopards, and other wild beasts.

**6. Minerals.**—The country is rich in iron, copper, lead, tin, coal, and petroleum. There is said to be silver in the Shan States. Burma is also famous for its ruby-mines, and sends out the finest rubies in the world. Jade and amber are found in the north.

(i) The only metal regularly mined is tin. It is worked in the Mergui district by Chinese miners.

(ii) It is along the eastern banks of the Irrawaddy in Upper Burma that the petroleum is chiefly found.

(iii) The ruby region lies on the table-lands to the north of Mandalay. It has an area of 200 square miles.

(a) "The RUBY MINES lie in the valley of Mokok. Gilt pagodas, glittering steeples, monasteries, and houses prettily situated in a long valley, with a background of hills towering high above, rich with the different colours of jungle foliage, and here and there tinted with patches of red and white, where a landslip had torn away the forest trees, or a new mine had been opened—such was the first impression of the LAND of the MINES. Centuries ago, this valley must have been an immense lake, and before that a volcanic crater. The ridge we had passed, known as the Golden Mountains, runs east and west from the backbone of Burma, divides the basins of the Irrawaddy and Salween rivers, and has its highest peak behind Mokok—the 'Dark Mountain' (9000 ft.)."

(b) "The mines are of three kinds : (i) Huge fissures in the hard gneiss rock, which have become filled with a soft reddish and blackish clayey earth, generally containing rubies ; these are called 'loos' or caves. The earth is extracted and washed by hand in small, flat, round trays of Bamboo basket-work ; (ii) The sides of the rocky hills show strata of red and white clayey earth, among which are found rubies and sapphires ; (iii) Pits are dug in the lower parts of the valleys, and at depths of from five to twenty feet layers of ruby-bearing earth are found."—STREETER.

**7. Industries.**—The chief industry of the country is agriculture. Next come timber-getting and the other industries connected with forestry ; and mining. The Burmese handicraftsman excels in wood-carving, in silver repoussé work, the weaving of silk with a fine harmony in colours, and in the making of lacquer-ware. Boat-building is also a thriving trade : and excellent boats are built on all the larger rivers.

**8. Commerce.**—Since the annexation of Upper Burma in 1886, the country has become more settled, peace is better secured, the industries of the people have thriven, and commerce has made great and rapid advances. Agriculture and forestry being the chief industries of Burma, the seaborne trade consists in exporting the produce of the soil, and receiving in exchange foreign manufactured goods, which the people cannot make for themselves. This trade is

chiefly centred at **Rangoon**, which after Calcutta is the busiest port on the Bay of Bengal. The chief exports are **rice, teak, cutch, hides, and cotton**. The chief imports are **cotton goods and yarns, silk goods, coal, hardware, salt, and metals**.

(i) The export of **rice** is the most valuable of any. It is the staple product of the alluvial lands of Lower Burmah; and it is considered superior to all other Eastern rice, with the exception of that grown in Japan and Java.

(ii) This rice is sent direct to Great Britain, Germany, Italy, America, Singapore, and China.

(iii) The internal as well as the external trade of Burmah is increasing very rapidly. The Irrawaddi Flotilla Company has a considerable fleet of large river-steamers and "flats"—each carrying a thousand tons.

**9. Communications.**—Under native rule, no roads or public works were constructed by the Government; unless now and then a bridge were built by some pious person as a means of earning religious merit. Since the various provinces of the country fell into British hands, streets and pathways have been made in the towns; and well-metalled and carefully bridged roads have been constructed throughout the country. Canals have also been cut, and railways connecting the towns in the interior with those on the seaboard have been made. Several hundreds of miles of embankments have also been built along the Irrawaddi to keep its waters within limits and prevent their overflowing the neighbouring country.

The Burmese railway-system starts at **Rangoon**. From Rangoon a branch runs north-west to **Prome**. The main line stretches up the Irrawaddi valley to **Mandalay**, the old native capital; thence, after throwing out a branch north-east towards the Shan States, it continues northward past Wuntho to **Myitkyina**, which lies on the upper Irrawaddi, a little north of Bhamo.

**10. Towns.**—The largest towns in Burmah are **Rangoon, Mandalay, Moulmein, Prome, Pegu, and Akyab**. **Bhamo**, which stands at the head of steam navigation on the Irrawaddi, is destined to become one of the great world-centres of commerce, as it will connect the basin of the Yang-tse-kiang with those of the Ganges and the Irrawaddi. In other words, it will become the entrepôt for the trade of China, Burmah, and Bengal.

(i) **Rangoon** (293) on the eastern branch, and near the mouth, of the Irrawaddi, is the chief port of Burmah and the seat of the British Government. It really stands at the confluence of three rivers, and is therefore extremely well situated for trade. It is connected by rail with Prome and Tongu (in the Sittang basin); and, next to

Calcutta, it is much the busiest port on the Bay of Bengal. It exports rice, teak, gums, and spices; and it imports British wares for Burmah and the Chinese province of Yunnan.

(ii) **Mandalay** (138), the capital of the "Kingdom of Ava" (or Burmah), is an immense quadrangle, ramparted with brick walls pierced by gates, and flanked by high towers with gilded roofs. In the centre stands a second conterminous enclosed square, which forms the royal quarter, with the palaces of the king, the court ladies, the ministers, and the white elephant. The mathematical centre was occupied by the royal throne, which is surmounted by a seven-spiral tower. Mandalay is famous beyond all other towns in Burmah for the number of its monasteries.

"The walls of **MANDALAY** rest on over fifty human bodies; for, in Burmah, as formerly in Palestine, the foundation of every building must be a 'live stone.' An accident to a reservoir of sacred oil in 1880 called for other human sacrifices—100 men, 100 women, 100 boys, 100 girls, 100 soldiers, and 100 strangers. But, when the victims began to be seized by order of King Theebaw, the whole population fled *en masse*, so that the sanguinary rites had to be countermanded."

(iii) **Moulmein**, on the east bank of the Salween, is a busy port. It exports teak, rice, and cotton; and "its dockyards turn out vessels noted for their strength and fine lines."

(iv) **Prome** is a busy river-port between Rangoon and Mandalay. It lies in a rich district which grows rice, tobacco, and all kinds of vegetables. It was at one time a very large town—with ramparts 36 miles in extent, and pierced by 35 gates.

(v) **Pegu**, on a water-course near the mouth of the Sittang, was once a busy port; but trade has left it for Rangoon.

(vi) **Akyab**, at the mouth of a large river called the Kuladan, also stands at the convergence of a very large number of watercourses. It is a great rice mart. When the railway across the Yoma is built, it will tap the trade of Mandalay and the Upper Irrawaddi.

(vii) **Bhamo**, on the upper waters of the Irrawaddi, and 900 miles from Rangoon, though a small town, is the most advanced military station towards China, and the largest entrepôt in the province of Upper Burmah. The cross route between the basins of the Irrawaddi and the Yang-tse-kiang begins here; and, in 1881, it was traversed by a caravan of over 1500 pack animals. This is "the future direct highway between India and China across the eastern continuations of the Himalayas." Railways are projected from Mandalay, through Bhamo, to Yunnan-fu; and these railways will tap the enormous trade of the basin of the Yang-tse-kiang, which is navigable from the sea up to Yunnan-fu. (Yunnan-fu stands on a navigable tributary of the Yang-tse-kiang.)

**11. Population.**—The people of Burmah numbered (1911) about  $12\frac{1}{4}$  millions. Of this number, Upper Burmah (including the Shan States) probably contains  $4\frac{1}{2}$  millions. The Burmese are a people with flat features, small eyes, and very like the Chinese in type. They delight in gay colours, in silk attire; and they are fond of



fun, of laughter, of dramas, dances, and shows of every sort. The Burmese are much better off than the Hindus, and earn twice as high wages. They are Buddhists by religion. The Shans, in the hill-country (of whom there are 2,000,000), are a hardier and braver race than the Burmese. They are all born traders.

(i) The Burmese, "when placed beyond the reach of greedy tax-gatherers or of plundering troops on the march, are bright, cheerful, intelligent, hospitable, fond of music and pleasure-seeking. The inhabitants of a burnt-out quarter have been seen to erect a theatre on the ruins, in order to indemnify themselves by a little amusement for the loss of their property."

(ii) As in Japan, so in Burmah, politeness is a natural virtue. But, though so gay and courteous, the Burmese look on the pain and even the torture of others with much calmness.



## THE FUTURE OF BURMAH

Our national interest in Burmah lies chiefly in the possibility of future commercial developments, and for that we must look chiefly to the newly acquired Shan States and their geographical position relative to the great productive centres of the vast country of China. . . . The Shan States themselves are not as yet fully developed, but it is the opinion of competent authorities that the temperate climate, ample rainfall and excellent soil, which they possess, renders them fit for the production of almost any form of vegetable product—nor are they destitute of mineral wealth. That unrivalled authority on the subject, Mr. J. G. Scott, writes as follows of the country bordering the line which is now happily in course of construction between Mandalay and Western China: "Such a line would traverse a country which produces everything, from indigo to tea and opium, from potatoes and cabbages to forests of teak, and is, moreover, rich in ores of all kinds,—so rich that an Indian mineralogist grows eloquent over a spot so singularly wealthy in metal that he calls it a solid mountain of iron, and records the absolute paralysis of his compass. . . . Lead and silver ores have long been found in abundance, and the paltry holes dug by our new Shan subjects yield an amount which promises to skilled labour a return which will probably eclipse in interest their much vaunted ruby mines. Hot springs and mineral waters await the arrival of the speculator in table drinks, and the mines of sulphur may probably be as valuable as the seams of coal which have yet to be scientifically examined."—*India*, Col. Sir THOMAS HOLDICH.

# CEYLON

COLOMBO.—LATITUDE 6° 59' N.

Lagos, Monrovia, Georgetown (Demerara).

LONGITUDE 79° 49' E.—Time 5.20 P.M.

1. **Introductory.**—Ceylon is the largest and most important of all the Crown Colonies in the British Empire. It is often called the “Pearl of the Eastern Seas;” and the Hindu poets speak of it as “the pendent jewel of Hindustan.” It lies to the south-east of the mainland of India.

(i) Milton speaks of it as “Taprobane” (the name given to it by the Greeks); and, in the *Arabian Nights*, it is called “Serendib.”

(ii) It is separated from the mainland by the Gulf of Manaar and Palk Strait; and this channel is almost bridged by the island of Ramisseram and a series of coral reefs and sandbanks called **Adam's Bridge**. A railway bridge across Adam's Bridge is under contemplation.

(iii) The greatest length of the island is 266 miles; its greatest breadth 140 miles. It contains 25,364 square miles; that is, a little less than the mainland of Scotland.

2. **Build.**—The island is pear-shaped; and it rises gradually from the sea to a high mountain-land in the interior. A sea of clear sapphire, long strips of golden sands, shaded by thick waving palm-groves, hills draped with forests of perennial green, table-lands rich with verdure, lofty mountains rising above soft heavily-massed clouds, everywhere the richest luxuriance of the densest tropical vegetation,—such is the “enchanted scenery” which rises before the eye of the traveller as he sails into the harbour of Colombo. The soil is extremely fertile, even in the high lands. Rolling plains occupy four-fifths of this island; the remaining fifth is a mountainous table-land in the central south—a table-land of from 6000 feet to 8000 feet above the level of the sea. There is only one river of any importance, the **Mahavila-ganga**.

(i) The highest mountain in the island is **Pedrotallagalla** (8260 feet, more than half the height of Mont Blanc); the most famous is **Adam's Peak** (7420 feet).

(ii) The table-land of **Nawara Eliya** (6210 feet) is a popular health-resort for Europeans.

(a) "It is truly impossible to exaggerate the natural beauty of Ceylon. Belted with a double girdle of golden sands and waving palm-trees, the interior is one vast green garden of nature, deliciously disposed into plain and highland valley and peak, where almost everything known to the tropical world grows, under a sky glowing with an equatorial sun, yet tempered by the cool sea winds."

(b) "In these latitudes the ocean presents aspects nothing inferior in glory and magnificence to the scenes beheld on land. The sea, in a perfect calm, resembles an azure mirror, polished, spotless, and brilliant, in which the slightest mote would have seemed a flaw, but from out of which, from time to time, shoals of flying fishes, like flocks of little white birds, emerged with a splash and a whirr like a covey of partridges, dropping one by one into the water again like a shower of canister or grape, and leaving only a few ripples which presently subside, and the water is once more like a clear sapphire."

(iii) The **Mahavila-ganga** rises near Adam's Peak, and falls into the ocean near Trincomalee. On the south side of the island there are ten rivers of some size.

(iv) The central highlands form a complete water-parting, from which rivers flow in every direction through the broad belts of lowland which surround the coast.

3. **Climate.**—The climate of Ceylon is more equable than that of India. As the extreme south is only about  $6^{\circ}$  from the Equator, it is very hot; but the heat is tempered by winds from the sea. The average annual temperature at Colombo is  $80^{\circ}$ . The hottest month is April. The south-west monsoon blows from May to October, and brings a great deal of rain. The average rainfall is 80 inches for the year, except in the north of the island, which is much drier, and where there is no more than 30 inches of rain.

4. **Vegetation.**—The flora of Ceylon is very similar to that of Southern India; but there are 800 species of plants that are peculiar to the island, and are found nowhere else. In the low lands, the prevailing tree is the **cocoa-nut palm**; and there are 40 million of these trees in Ceylon. The **areca-palm** and the feathery **jaggery** also add beauty to the landscape. The most valuable among the timber trees are **satin-wood** and **ebony**. In the mountain forests, **tree-ferns** (sometimes rising to the height of 25 feet), scarlet-flowering **rhododendrons**, **bamboos**, and **orchids** are found in profusion.

There are about 150 species of **orchids**.

5. **Animals.**—In the forests of the interior there are large herds of wild **elephants**; and **buffaloes** exist in great numbers, half-wild, but still compelled to plough the fields for rice. The only animals dangerous to man are the **black bear** and the **leopard**; and, among the smaller carnivora, the **palm-cat** and the **genette** (a civet) are well known. The **wild boar** also roams through the forest. The **dugong** is common on some parts of the coast. There are 16 species of bats,

the most remarkable being the **flying-fox**. **Deer** and the humped **oxen** of India are plentiful. There are 320 species of birds in the island. **Sun-birds**, **bulbuls**, **parroquets**, **jungle fowl**, etc., and among the myriads of aquatic birds, **flamingoes**, are very common. There are **crocodiles**, **tortoises**, and **lizards** : the crocodile being the largest reptile. There are a few species of venomous snakes : the **cobra da capello** being the most dangerous. There are many kinds of fish round the coast, such as **mullet**, **mackerel**, **soles**, and **sardines** ; but the most astonishing fish are those that are remarkable for the brilliancy of their colouring, such as the **Red Sea perch**, and the **fire-fish**.

(i) "In Ceylon we do not find the tiger, hyaena, cheetah, wolf, fox, various deer, birds, etc., common in India."

(ii) The **elephant** of Ceylon is in general without tusks. The food he finds is soft and easily got at ; and he has not the difficulties to encounter of his African brother, who is provided with long and strong tusks.

(iii) **Buffaloes** thrive on dry coarse grass, and can find a living where oxen would starve.

(iv) "Many of the birds have splendid plumage ; hawks and owls are numerous ; and the island is singularly rich in wading and water-birds. Ibises, storks, egrets, spoonbills, and herons abound on the wet lands ; while flamingoes line the beach in long files, and on the deeper inland waters swim a countless variety of ducks and other waterfowl. Partridge, quail, and snipe figure prominently among the game-birds for which Ceylon is so famous."

(v) "The song of the robin and long-tailed thrush, and the flute-like voice of the oriole, are heard over the whole mountain-zone and far down into the neighbouring plains."

(vi) The **Red Sea perch** is of the deepest scarlet ; the great fire-fish of a brilliant red ; while some fish are marked with bands of blue, crimson, purple, green, yellow, and grey, crossed with stripes of black.

6. **Minerals**.—Ceylon is very rich in **iron** (scarcity of fuel prevents its being worked), and also in **plumbago** (or graphite), 179 mines of which are worked in the island. The **gems** of Ceylon have been famous all the world over, and from the earliest times. **Sapphires**, **rubies**, **amethysts**, **moonstones**, **cinnamon-stones**, and **cats'-eyes** are among the best known. The **pearl-fisheries** are among the oldest and most celebrated in the world.

(i) The **plumbago** of Ceylon is of the finest quality for crucible purposes. The mines are worked exclusively by Cingalese.

(ii) The manufacture of salt is a Government monopoly.

(iii) The fishery for pearls lasts only 42 days each year ; and the produce varies very much. In 1887, it realised nearly £40,000 ; in 1904, not quite £67,000. Large pearls fetch in Ceylon from £40 to £60 ; in Europe they are sold for at least three times these prices.

**7. Industries.**—By far the most important industry is agriculture. Next to this, but at a great distance, comes **stock-raising** ; and, lastly, **plumbago-mining**. About one acre in every five is under cultivation in the island.

(i) About 880,000 acres are under **rice** and other **grains**.

(ii) About 1,035,000 acres are under **cocoa-nut palms**.

(iii) Over 535,000 acres are under **tea**.

(iv) About 1700 acres are under **coffee**.

(v) The British Government has done an immense amount for the irrigation of many parts of the country.

**8. Commerce.**—The commerce of Ceylon grows steadily but not rapidly. The principal articles of export are **tea**, **rubber**, **cocoa-nut products**, **plumbago**, **cinchona**, and **cinnamon**. The chief imports are **rice**, **coals**, **cotton goods**, and **salt-fish**. The United Kingdom buys from Ceylon goods to the amount of about £6,500,000 a year ; and sells to it about £3,500,000 worth. Great Britain every year takes more and more tea from Ceylon.

(i) The staple product of Ceylon was formerly **coffee** ; but the trees were attacked by a fungus.

(ii) **Tea** now occupies the leading place in the industries of the island.

(iii) **Cinchona** has to a large extent taken the place of **coffee** ; and its production in Ceylon “has revolutionised the price of quinine all over the world.”

(iv) “The **cocoa-nut palm** is an extremely useful article to the natives, supplying them as it does with food, drink, and domestic utensils, as well as thatching materials, mats, baskets, and timber. A great many millions of the **cocoa-nuts** are exported ; but the chief trade is in **coir fibre** and **oil** from the kernel.”

(v) **Rubber** planting is a young, but very flourishing industry.

**9. Communications.**—There are in the island 2500 miles of good metalled road ; about 600 miles of railway, and about 5000 miles of telegraph wire.

**10. Inhabitants.**—The people of Ceylon are called **Cingalese** ; and there are about 4,110,000 in the island. The men, who wear a dress



like a woman's, and bind their hair with combs, look very effeminate. The Kandyans, in the mountain-nucleus of the interior, are a sturdy highland race, and maintained their independence for three hundred years after the low country had been conquered by Europeans. The religion is **Buddhism**. The British Government and British missionaries do much to educate the people ; and there are more than 300,000 scholars in their schools.

(i) There are a good many Chinese **coolies** on the coffee-plantations ; but they can leave at a month's notice.

(ii) There are about 260,000 **Moors** in the island.

11. **Towns**.—The only town of any size is **Colombo**, the capital. The others are **Galle**, on the south coast, **Kandy**, in the interior, and **Trincomalee**, on the north-east coast.

(i) **Colombo** (158) is now a great harbour. Since the breakwater was constructed (1875-78), Colombo has gradually superseded Galle as a coaling-station for large steamers. It is the seat of the British Government of the island. It is connected by railway with Kandy.

" **COLOMBO** itself, outside the actual town, is a perfect labyrinth of shady bowers and flowing lakes and streams. For miles and miles you drive about under arbours of feathery bamboos, broad-leaved bread-fruit trees, talipot and areca palms, cocoa-nut groves, and stretches of rice-fields, cinnamon and sugar-cane, amid which at night the fire-flies dart about in glittering clusters. The lowliest hut is embosomed in palm fronds and the bright crimson blossoms of the hibiscus ; while, wherever intelligent cultivation aids the prolific force of nature, there is enough in the profusion of nutmegs and allspice, of the indiarubber and cinchona, of cannas, crotons, and other wonders of the Cingalese flora to give an endless and delighted study to the lover of nature.' —ARNOLD.

(ii) **Kandy** (26), on the table-land of the interior, contains the ruins of the palace of the ancient native kings of Ceylon.



## THE CONDITION OF CEYLON

**1. Area** . . . . . 25,364 square miles

This is nearly the size of the mainland of Scotland.

**2. Population (1911)** . . . . . 4,110,367

The DENSITY of population varies from 259 persons per square mile in the West to 15 in the North.  
The average density is 104.

**3. Exports (1912)** . . . . . £13,263,000

(i) The largest export from Ceylon is **tea**.

(ii) The next three largest are cocoa-nut products, plumbago, cinchona, and cinnamon.

**4. Imports (1912)** . . . . . £12,000,000

The chief imports are rice, coals, cotton goods, and salt-fish.

**5. Manufactures** . . . . . None

**6. Trade with Great Britain (1912)** . . . . . £9,916,000

(i) Of this trade £6,530,000 are for **exports**. (Tea alone = £3,000,000.)

(ii) **Imports** were valued at £3,386,000.

**7. Communications (internal)** . . . . . Increasing

(i) There are only about 660 miles of **railway** in Ceylon.

(ii) There are 5000 miles of **telegraph wire**.

(iii) There are 170 miles of canal.

**8. Communications (external)** . . . . . Excellent

Colombo is the "Clapham Junction of the Eastern Seas"—the most central port of the Indian Ocean, and passengers change here for India, China, and Australia.

### 9. Tea Export to the United Kingdom—

In 1873 the value was £120.

In 1888   ,,   ,,   £1,244,000.

In 1898   ,,   ,,   £3,694,000.

In 1910   ,,   ,,   £3,000,000.

## MINOR ASIATIC POSSESSIONS

1. **Aden and Perim.**—ADEN is a volcanic peninsula on the coast of Arabia—about a hundred miles east of the Strait of Bab-el-Mandeb. It is one of the most important coaling-stations in the British Empire, as it stands on the great water highway to the East. It is for this reason strongly fortified. Aden, along with the island of Perim at the mouth of the Red Sea, forms part of the Presidency of Bombay. Its commercial value centres chiefly in its being a trade emporium. The chief exports are **coffee, gums, hides, and tobacco**. The chief imports are **cotton twist, piece goods, grain, hides, and tobacco**.

(i) **Aden** (which is a small territory half the size of Rutlandshire) produces nothing. The trade is a trade of transshipment—with the exception of that from the interior of Arabia.

(ii) The protectorate of the **Somali Coast**, which lies opposite Aden, is exercised by a consul who is subordinate to the consulate at Aden. The Somalis are Mohammedans. Their chief port is **Berbera**, which exports **cattle** and excellent **sheep**, and also **gums, hides, coffee, etc.**

(iii) The island of **Socotra** (off Cape Guardafui), and the **Kuria Muria Islands** (off the coast of Arabia) are also attached to Aden. Socotra is just half the size of Yorkshire. Its chief product is **aloes**. The five islands called Kuria Muria were ceded by the Sultan of Muscat for the purpose of landing an electric cable.

2. **The Bahrein Islands.**—This group of islands lies in the Persian Gulf; and the largest is about half the size of Hertfordshire. The commercial capital—a “long town” which stretches ten miles along the shore—is **Manammeh**. The chief industry is the pearl fishery; and the annual export of **pearls** amounts to over £300,000. The chief import is **grain**. Most of the trade is in the hands of British merchants.

3. **Cyprus.**—This island is the third largest island in the Mediterranean; and it lies about forty miles off the coast of Syria. It is in shape like the skin of a deer (the long peninsula of Carpas being the

tail); and the interior is very mountainous. Only one-third of the cultivable land is under cultivation; the destruction of the forests, the neglect of the old irrigation-works, the decay of wells, and the absence of any system of water-storage have greatly reduced the fertility of the island. The rivers only flow after heavy rain, or when the snow melts upon the mountains. The chief exports are raisins, cocoons, sponges, wines, wool, wheat, and flour. The principal imports are cotton and woollen goods, tobacco, groceries, etc. The annual exports amount to about £790,000; and the imports to £700,000. The three largest towns are Nicosia (16), the capital, and the two ports of Larnaca (9), and Limasol (10). There are telegraphs, a submarine cable to Alexandria, and about 400 miles of good road.

(i) Cyprus was ceded by the Turks in 1878, to Lord Beaconsfield, who regarded it as a "place of arms" commanding the mouth of the Suez Canal. It was formally annexed by Great Britain in 1914.

(ii) Locusts were the pests of the island; they have been exterminated. Goats are still the pests; they bite off the tops of the shoots of young trees as fast as they appear. Hence the process of re-afforesting the island is retarded, and its climate and fertility injured.

4. **Hong-Kong.**—This island—which is a Crown Colony—is one of the great world-centres of British commerce. It is the centre for British commerce with China and Japan, and the headquarters of European finance in Eastern Asia and its waters. It is one of the largest entrepôts in the world. It is also a naval and coaling-station of the first class. Hong-Kong, "the Gibraltar of the East," lies at the mouth of the Canton River, and about 90 miles south of the city of Canton. Its area is about 30 square miles. The harbour—10 square miles in extent—is one of the finest and largest in the world. The city of **Victoria**, one of the most beautiful cities of the East, stretches for upwards of four miles along the southern shore of the vast harbour. The trade done is immense. Goods to the value of about £20,000,000 come in every year; and the value of those sent out exceeds £25,000,000. The trade between Hong-Kong and Great Britain averages, in exports, £750,000 a year; and in imports £3,300,000. The trade between Hong-Kong and China alone amounts to 35 millions. The chief exports to Great Britain are **tea, silk, hemp**, and a little copper. The principal imports from Great Britain are **cottons, woollens, iron, and lead**. Steamers run regularly between

Hong-Kong and the greater ports of Great Britain and Europe ; to the chief ports of India, Australia, Japan, and Canada ; and also to Singapore and San Francisco.

The proper name is *HLANG-KIANG* (= " Place of Sweet Streams ").

(i) Britain holds also the peninsula of Kowloon on the mainland opposite.

(ii) The island of Hong-Kong is a bare granite rock, with little or no soil.

(iii) The Harbour is a very busy one ; and, in addition to nearly 4000 vessels from Europe, about 25,000 junks go in and out. The larger half of the tonnage belongs to Great Britain.

" Thousands upon thousands of junks lie in rows upon the water. Some laden with cargo are making their final preparations for departure. Gongs are beating, crackers firing, papers burning to propitiate the deities to whose protection the crew intrust themselves ; others lie-to along the sea-wall, and strings of coolies in pairs, with heavily laden bamboos on their shoulders, are transferring the cargoes from the junks to the warehouses."

(iv) The population of the possession is about 440,000—more than  $\frac{1}{10}$  of whom are Chinese. Of the white population, one half are Portuguese ; and only one-third English.

" Well-to-do shops, both English and Chinese, line the streets on either side ; substantial buildings of brick and granite attract the eye. Thick-leaved rows of banyans line the roads ; an air of general activity conveys a sense of prosperity and contentment ; while the spectator is amused by the bewildering confusion of jinrickshas, sedan-chairs, peripatetic cook-stalls, pedestrians of all sorts, hawkers, barbers' stands, coolies carrying their nicely balanced loads on bamboos, women with children strapped on their backs, all making a motley crowd that fills the streets from morning to night. The aspect from the sea is of especial beauty, with something of the rugged grandeur of the Western Scottish Isles, and a suggestion of Italian softness and grace."

(v) In 1848 the population was 24,000 ; it is now about twenty times that number.

(vi) The summer months are the months of the south-west monsoon ; and rain and heat are the characteristics of the climate. In winter the north-east monsoon blows ; the climate is dry, invigorating breezes blow, and the skies are clear and beautiful.

**5. Beluchistan.**—This country of Central Asia is practically a dependency of Great Britain. It is a little larger than the United Kingdom. But the total population is only about half a million. There are many small towns ; but the best known are **Khelat** (14) the capital, and **Quetta**, which is permanently held by us. The whole country may be described as a vast camel-grazing region. There are a few exports to British India, such as **wool**, **hides**, **madder**, **tobacco**, and **dates**.

(i) In 1877 we obtained the right of permanently garrisoning Quetta, and of having a political Resident at Khelat. The N.-W. Railway from Karachi branches to Quetta.

(ii) Vast deserts, swept by sand-storms in summer, and by biting winds in winter, occupy much of the country. The few rivers flow only after heavy rains. But, wherever water can be got, the soil is productive.

(iii) Minerals are found here and there ; and some valuable petroleum wells have been discovered in the North. **Coal** is worked round **Quetta**.

6. **Sikkim**.—This small feudatory state lies among the Himalayas. It is about as large as Lincolnshire. The population is only about 88,000. The principal towns are **Tumlong** and **Gantok**. The country produces maize, millet, oranges, and tea. The trade-route from Bengal to Tibet lies through Sikkim. There is a small trade done with British India, which receives from Sikkim **food-grains** and **vegetables**, and sends **cotton goods**, **tobacco**, and **rice**.

7. **The Andaman and Nicobar Islands**.—The **Andamans** are a group of thickly wooded islands on the east side of the Bay of Bengal about 600 miles from the mouth of the Hoogly. They are mainly used as a convict settlement for British India. **Port Blair** is the principal harbour. The **Nicobars** are a group to the south of the Andamans. Great Nicobar is 30 miles long, and contains half the area of the entire group. The islands yield annually 15,000,000 cocoa-nuts, one-half of which are exported. They also export edible birds'-nests, tortoise-shell, ambergris, and trepang.

(i) Both groups of islands are the prominent parts of a submarine plateau which is a continuation of Burmah. They are in "wireless" connection with Burmah.

(ii) It was near Port Blair (one of the finest harbours in the world) that Lord Mayo, a Governor-General of India, was murdered by a convict.

8. **The Laccadive Islands**.—The **Laccadives** are a group of islands off the west (or Malabar) coast of the Madras Presidency. The staple product is **coir**.

9. **Kamaran Island**.—This is a small island in the southern part of the Red Sea, on the west coast of Arabia. It has excellent sheltered anchorage.

10. **Labuan**.—**Labuan** is a small island off the north-west coast of Borneo. It forms part of the Straits Settlements. The island has a fine harbour (Victoria), and possesses extensive **coal-mines**.

(i) The coalfield of Labuan is estimated to contain 400,000,000 tons ; and the coal is of good quality. There are also some sago-factories on the island.

(ii) Labuan is also a market for the produce of the neighbouring Protectorate of Borneo. This produce consists of edible birds'-nests, bees'-wax, camphor, gutta-percha, india-rubber, tortoise-shell, etc.



**11. North Borneo.**—**British Borneo** is a territory—nearly as large as Ireland—in the northern part of the island of Borneo. It lies nearly midway between Hong-Kong and Port Darwin in Australia. The interior is mountainous, and much of it is covered with jungle. The population is only 204,000. There are vast possibilities of wealth in the territory : little as yet realised. The sea-products—pearls, *bêche-de-mer*, tortoise-shell, turtle-eggs, sharks' fins, sponges, oysters, and many kinds of fish—are destined to become important articles of commerce. The forest products—timber valuable for cabinet work, rattans, gutta-percha, india-rubber—are becoming more and more searched after. There is gold in several places ; and there is also coal. The exports are **wax, birds'-nests, cocoa-nuts, gutta-percha, sago, tobacco, seed-pearls, bêche-de-mer** ; and a flourishing trade in **timber** has been opened with China. The capital is **Sandakan**.

(i) "One thing is certain : North Borneo will ere long be a great tobacco-producing country ; and for luxuriance in growth the settlement can vie with the most favoured isles of the Antilles."

(ii) "Elephants, sometimes in large herds, range the dense jungles. The Sumatran rhinoceros is also found ; and buffaloes abound wherever there is an open country overgrown with grass. Wild boars are numerous, and afford both sport and dainty food. Crocodiles are numerous ; but, wherever Europeans settle, the ferocious monsters are soon thinned out. Fish are plentiful and of good quality."

**12. Brunei.**—This is a small territory about half the size of Yorkshire—south of North Borneo, under British protection. Its products are of the same character as those of North Borneo.

**13. Sarawak.**—This territory—which lies to the south of Brunei—is a good deal larger than Ireland. It is under the protection of Great Britain. Its population is only about 600,000. The products are the same as those of North Borneo : but there is also a great deal of coal ; and the country is said to be rich in gold, silver, and other metals.

(i) **Sarawak** was acquired in 1840 by a brave Englishman—**Sir James Brooke**—who made himself **Rajah**.

(ii) The staple exports are **sago, rattans, and pepper**.

**14. The Straits Settlements.**—The Straits Settlements, so called because they lie on the Straits of Malacca, form a Crown Colony,

which comprises **Singapore**, **Penang** (which includes the **Province Wellesley**), **Malacca**, and the **Cocos Islands**. In fact, the whole southern portion of the Malay Peninsula—a territory larger than Ireland—is now under the protection of the British Government. The Sultans of **Perak**, **Selangor**, **Negri Sembilan**, and **Pahang**, have accepted the control of Great Britain, and have received Residents from us. “We have succeeded, by moral influence alone, in establishing the **Pax Britannica** in one of the most fertile regions on the surface of the earth, and have left man and nature free to do the rest.” The chief exports of the Straits Settlements are **tin**, **sugar**, **spices**, **tapioca**, **rice**, **rattans**, **dye-stuffs**, **india-rubber**, **gums**, and **tobacco**. The chief imports are **coal**, **cotton**, **opium**, **hardware**, and **provisions**. The volume of trade which pours through Singapore and the other settlements is enormous, and amounts to about £56,000,000 a year.

SINGAPORE.—LATITUDE 1° 24' N. **Quito**,  
Island of St. Thomas (off west coast of Guinea).  
LONGITUDE 103° 51' E. Time 6.55 P.M.

15. **Singapore** is an island of about two-thirds the size of **Middlesex**, lying at the southern end of the long Malay Peninsula. The capital is **Singapore** (300), which possesses a splendid harbour, with three miles of wharves. Singapore is one of the great world-centres of commerce. Through it passes all our trade with the far East, much of the trade that goes to Australia, and a large part of the commerce between Australia in the south, and India and China on the North Pacific Ocean. It is strongly fortified.

(i) “It is a loveliness that at once strikes the eye from whatever point we view the island, which combines all the advantages of an always beautiful and often imposing coastline, with an endless succession of hill and dale stretching inland. The entire circumference of the island is one panorama, where the magnificent tropical forest, with its undergrowth of jungle, runs down at one place to the very water's edge, dipping its large leaves in the glassy sea, and at another is abruptly broken by a brown rocky cliff, or a late landslip, over which the jungle has not yet had time to extend itself. Here and there, too, are scattered little green islands, set like gems on the bosom of the hushed waters, between which the excursionist, the trader, or the pirate is wont to steer his course. ‘Eternal summer gilds these shores’; no sooner has the blossom of one tree passed away than that of another takes its place, and sheds perfume all around. As for the foliage, that never seems to die. Perfumed isles are in many people's minds merely fabled dreams, but they are easy of realisation here. There is

scarcely a part of the island (except those few places where the original forest and jungle have been cleared away) from which at night-time, on the first breathings of the land-winds, may not be enjoyed those lovely forest perfumes, even at a distance of more than a mile from the shore. These land-winds—or more properly land-airs, for they can scarcely be said to blow, but only to breathe—usually commence at ten o'clock at night, and continue within an hour or two of sunrise."

(ii) **Penang** (formerly styled "Prince of Wales Island") is an island about two-thirds of the size of Rutlandshire, at the northern entrance of the Straits. Opposite it stands the **Province Wellesley**. The chief town of Penang is **George Town** (128). **Sugar** is the staple product of the island. The **Dindings**, a group of islands, are now incorporated with Penang.

(a) "From the summit of the highest peak the whole island presents very much the appearance of a forest, the villages always lying in the midst of groves of cocoa-nut palms."

(b) "The fauna includes the wild cat, many species of monkeys, lemurs, and bats, wild oxen and hogs, pelicans, peafowl, and a great variety of small birds of brilliant plumage, the preparation of which for export to Europe forms a somewhat important branch of native employment."

(iii) **Malacca**, the largest of the Straits Settlements, is a country a little larger than Hertfordshire. The chief exports are **rice**, **tin**, and **tapioca**.

(iv) The climate of the Straits Settlements is almost uniform throughout the year; and the trees are always covered with leaves. The highest temperature is 84°; the lowest is 79°.

"For a country within only one degree of the Equator, Singapore has a remarkably healthy climate. The nights are cool and refreshing; and the atmosphere is almost uniformly serene."

(v) The **Cocos** (or **Keeling**) Islands are a group of about twenty small coral islands, which lie about 700 miles south-west of Sumatra. They are thickly planted with cocoa-nut palms. They export large quantities of **copra**, **cocoa-nuts**, and **oil**.

(vi) **Christmas Island** (S. lat. 10° 25') is a small uninhabited island about 200 miles south-west of Java. It is the apex of a great submarine mountain. "It was annexed by Great Britain in view of a possible cable from India to Australia." (There is another Christmas Island in N. lat. 1° 57').

**16. The Federated Malay States.**—These are four in number—**Perak**, **Selangor**, **Negri Sembilan**, **Pahang**; the federal capital is **Kuala Lumpur** in Selangor. These federated states are administered under the advice of a British Resident-General. The Sultanate of **Johore**, at the extreme end of the Malay Peninsula, though virtually a British Protectorate, is not yet a member of the Federation. The chief industry of the Federated States is **tin-mining**; but **coffee**, **rice**, **sugar**, **tea**, **pepper**, etc., promise successfully. Short railways run from the coast into the interior. The total area is about 25,000 square miles, and the population (1911) was 1,036,999. The total trade of the States amounts to over £13,000,000.

(i) **Perak** is the most northerly of the States. Its coasts are low and swampy, and bordered with mangroves; the interior is densely wooded (features which characterise all the Malay States). There are very rich tin-fields at Larut.

(ii) **Selangor** lies just south of Perak. It contains the federal capital, Kwala Lumpur, which is connected by rail with the rising seaport of Port Swettenham.

(iii) **Negri Sembilan** is itself a confederacy of several small States. It lies in the interior, north of Malacca.

(iv) **Pahang** (12,000 square miles) is the largest of the States. It lies on the east coast of the peninsula.

**17. Wei-hai-Wei.**—The territory of Wei-hai-Wei (*way-high-way*) was “leased” by Great Britain from China in 1898. It lies on the north side of the Shantung Peninsula. Its area is about 285 square miles, with a population of 147,000.

(i) Wei-hai-Wei was originally intended as a counterpoise to Port Arthur, on the opposite side of Pe-Chi-li Strait, when that fortress was in Russian hands. But the British Government has decided not to fortify it, and the dependency (chief port—Port Edward) is used as a naval base and sanatorium.

(ii) The climate of Wei-hai-Wei is one of the best in China—not too hot in summer, and dry and bracing in winter. It has steam-communication with the Chinese treaty-port of Chefu, 40 miles distant.

#### CONDITION OF THE STRAITS SETTLEMENTS

**1. Area** . . . . . 1500 square miles

**2. Population (1911)** . . . . . 714,249

**3. Exports (1912)** . . . . . £31,000,000 <sup>1</sup>

The chief exports are tin, pepper, and other spices, sago, gums, gambier, rattans, gutta-percha, copra, etc.

**4. Imports (1912)** . . . . . £37,500,000 <sup>1</sup>

The trade of the Straits Settlements, which is centred at Singapore, is, to a large extent, a TRANSIT TRADE.

The chief imports are cotton-goods, opium, rice, fish, coal, tobacco, etc.

**5. Trade with Great Britain (1912)** . . . . . £11,000,000

(i) Of this trade £7,000,000 are for exports (chiefly tin, spices, and gutta-percha).

(ii) About £4,000,000 are for imports (chiefly cottons and machinery).

**6. Communications (internal)** . . . . . Fair

On the jungly mainland the rivers afford the chief means of communication. But short lengths of railway are built or building; the Selangor, in the Federated States, boasts of 343 miles of metalled road.

**7. Communications (external)** . . . . . Excellent

(i) Singapore is the meeting-place of about fifty regular lines of steamers from west, east, and south.

(ii) The nickname of Singapore is the “Coal-hole of the East.”

<sup>1</sup> The exchange = £12 to £1.

# AFRICA

SOUTHERN AFRICA

CENTRAL AND EAST AFRICA

WEST AFRICA

ISLANDS ROUND AFRICA

# SOUTHERN AFRICA

1. **Southern Africa.**—The whole of temperate South Africa, between the Kalahari desert on the north and Cape Agulhas in the south, is in British hands. The chief divisions are—the **SOUTH AFRICAN UNION**, which includes the once separate provinces of the **Cape of Good Hope**, **Natal** (with Zululand), the **Orange Free State**, and the **Transvaal**; and the three British possessions of **Basutoland**, **Bechuanaland**, and **Rhodesia**.

(i) *Transvaal* means the country *beyond* the Vaal, which is one of the chief tributaries of the Orange River.

(ii) The Transvaal and the Orange Free State were annexed to the British Crown during the course of the great Boer War in 1900.

CAPE TOWN.—LATITUDE 33° 56' S. Sydney, Adelaide,  
Buenos Ayres, Monte Video, Valparaiso, Santiago (Chili).  
LONGITUDE 18° 28' E. TIME 1.13 P.M.

## CAPE COLONY (Cape of Good Hope Province)

2. **The Country.**—This colony is bounded on the north-west by Great Namaqua Land, which forms part of German South-West Africa; on the north by the Molopo River, which, when fed by infrequent rain, occasionally reaches the Orange, and by the Orange River Colony; on the north-east by Basutoland and Natal; and on its other sides by the Atlantic, the Southern, and the Indian Oceans. Its area amounts to slightly over 277,000 square miles—that is, rather more than the area of the Austrian Empire, or to more than four times that of England and Wales. The population—black and white—is just over 2½ millions.

(i) The Austrian Empire has a population of some 47,000,000.

(ii) Cape Colony used to be bounded on the north by the Orange River. But in 1880 Griqualand West (in which lies the diamond-town of Kimberley), on the north side of the Orange, was added to it; and in 1895 it was further increased by the addition of the old Crown Colony of British Bechuanaland. Its north-eastern boundary was increased by the annexation of Pondoland in 1894.

(iii) “Come what may, we cannot abandon our half-way house to India and Australia at Table Bay and Simon’s Bay.”—DILKE.

(iv) **Great Namaqua Land** has been described as containing “plenty of sand and stones, a thinly scattered population, always suffering from want of water, on plains and hills roasted like a burnt loaf under the scorching rays of a cloudless sun.”

(a) The Cape of Good Hope was discovered by the Portuguese navigator, Bartholomew Diaz, in 1486.

(b) Between 1652 and 1795 the Dutch East India Company were the masters of the country.

(c) In 1795 the English took possession in the name and on behalf of the Stadtholder of Holland. In 1803 they restored Cape Colony to the Dutch, captured it again in 1806, and in 1815 the British possession was finally confirmed by the Treaty of Paris.



3. **Mountain Ranges.**—The country consists of the southern half of the basin of the Orange River ; and of the whole of the basins of a large number of rivers which fall into the Atlantic, the Southern, and the Indian Oceans,—the largest of which is the **Olifant** (= Elephant). It has therefore two slopes—a long slope to the north, and a somewhat shorter slope to the south. The country rises from the sea by a series of three terraces up to the central and higher range. The supporting walls of these terraces are chains of rugged mountains which are intersected by “Kloofs” or deep ravines. The direction of the ranges of mountains is generally the same as that of the coast ; and it is through these rugged gorges or ravines (Kloofs) that the



CAPE COLONY.

mountain rivers find their way to the sea. The highest points are found in the culminating range of the **Nieuwveld** (= New Fell or Plateau), and in the **Sneeubergen** (Snow Mountains) which rise to a height of 8500 ft. These ranges, with the **Stormberg**, etc., form the main watershed of the country. From this chain the land descends to the Southern Ocean in three terraces—one between the Nieuwveld and the **Zwarte Bergen** (= Black Mountains) ; another between the Zwarte

Berge and the **Lange Bergen** (=Long Mountains); and the third between the Lange Bergen and the coast. The farthest back of these three terraces contains the plains of the **Great Karroo**. The country is very deficient in navigable rivers: with the exception of the **Berg** and the **Olifant**, all are mere mountain torrents. Nearly two-thirds of the country consists of "vast arid plains, which are covered with shallow beds of the richest soil."

(i) The mountains are in many cases simply the seaward edges or supporting walls of the table-lands. The general direction of the mountain-ranges is that of the coast; and they are cut across at intervals by deep ravines or gorges (called "Kloofs") through which the rivers find their way to the sea.

(ii) "The whole of what was once Kaffirland, but which is now more commonly known as **Kaffraria** and the **Transkeian Territories** (=trans, beyond the *Kei*), is a glorious country, fertile and beautiful, and frequently grandly picturesque. The Drakensberg Mountains, which are more or less snow-clad during the winter months, contain the most magnificent scenery. Their native name "Quathlamba" (=jumbled jaggedness in heaps) is descriptive of their general appearance. They assume the most fantastic shapes and forms; and it requires but a small stretch of the imagination to see in their rugged heights castles and castellated turrets, spires, pinnacles, and towers. Streams without number have their sources in them, and flow onward to the lower plateau, which consists of rolling plains and open valleys, that abound in rich grassy pasturage and very fertile soil. Dotted here and there over the surface of the country are the numberless huts and kraals of the native inhabitants, with their sleek cattle grazing on the grassy slopes—a picture of the fairest pastoral beauty."

(iii) A **Karroo** is a large barren tract of clayey table-land. It is covered with low bush; and, when rain does fall, it quickly clothes itself with grass and all kinds of flowers.

(iv) The **Great Karroo** is about two-thirds the size of Scotland—is covered with an ochre-coloured soil, which consists of clay and sand tinged with iron, and in summer is as hard as a brick. But the soil is full of the roots of bulbous plants; and, a few days after a rainfall, is like a smiling flower-garden.

(a) "The greatest portion of the country is taken up for sheep-farming; and the most remarkable part, peculiar to the colony, is the **KARROO**. It is dotted over with small bushes (the *schaap-bosch* or sheep-bush, a remarkably nutritious plant) and is generally deficient in shade, grass, and permanent water. This large marvellous tract of country—which has been regarded as semi-desert—is as fertile as the banks of the Nile, provided it receives sufficient moisture. But even the severest drought cannot destroy its vegetation. You look around for miles and miles; you see nothing but dusty ground and small stumps of bushes here and there on the surface; not a green leaf, not a blade of grass,—except, at long intervals, rows of mimosa-trees along the dried-up beds of rivers. You think this is desolation itself—a lifeless and life-destroying desert. At last your eye lights on a building in the distance. You see trees near the house; you get to a farm; you are hospitably received, are treated with coffee and goat's milk ('*bokke melk*'); the old man shows you his fountain (a spring) which he has lately opened up by the aid of dynamite; he shows you his steam-engine to pump up water for the flocks; his water-dam, that cost him hundreds of pounds; his garden with wonderful wheat and oats, splendid fruit-trees, enormous pumpkins. He tells you that for three years it has been very dry—rain only twice or three times; his lambs are lost, many of his big sheep dead also; but the rest are all right—as long as his fountain runs he has no fear; while they have water, they keep alive

on the stumps of the bushes. And when rain, good rain, comes, then all these bushes revive : there is a general resurrection, grass springs up ; there is abundance of food for the flocks, and the sheep, after suffering a little from the sudden change, soon prosper and increase as nowhere else in the world."

- (b) "Since the heavy rains there has sprung up, all over the country (the Karroo), a most extraordinary and unprecedentedly luxuriant crop of countless millions of young seedling Karroo bushes. Should one-fourth of this new crop attain maturity, it cannot but double the value of the land for grazing purposes. This remarkable phenomenon is but one more surprising evidence of the wonderful powers of rejuvenation possessed by our arid-looking Karroo plains and barren hills, that have stood the wind's fiery blast and the sun's scorching rays for many and many a drought-stricken summer, and that still maintain their character as the best grazing-grounds for all stock in South Africa, and are perhaps equal to any other in the world."

- (c) "This vast area covers about 48,000,000 acres ; and it supports 5,000,000 of merino sheep.

4. **Plains.**—Nearly two-thirds of Cape Colony consists of vast arid plains, covered, however, with shallow beds of very rich soil. They only require water ; and hence the first thing for the settler to do is to make a "dam" to save up a supply of water. The Eastern Province is better watered than the Western Province. In the East, there are grassy plains, river-courses, with well-wooded banks, and picturesque mountain glens.

(i) "During periods of drought nothing can be imagined more desolate and mournful than the appearance of the vegetation. The soil is rarely covered, bare patches of greater or less extent intervening between shrubs and bushes. These are frequently blackened by drought as if they had been killed by fire. . . . After copious rains all will be changed within a week or two, as if by magic. Many of the apparently dead bushes put forth bright green leaves ; the shrublets are covered with flowers often before leaves can be seen ; bulbous plants, which may not have flowered for several years previously, send up their shoots with incredible rapidity ; and annual flowering herbs and grasses are everywhere seen where before all was bare and barren."

(ii) The characteristic vegetation consists of bulbous plants and heaths ; of the latter there are several hundred varieties. Hooks, thorns, and prickles also abound ; and these are the natural provisions for dispersing the seeds. One plant is called by the Dutch "Wait a bit !" because of the way it catches the dress of the traveller and the fleece of the sheep.

5. **The Coast.**—The coast is of the regular character peculiar to Africa ; it is upwards of 1300 miles in length. Gulfs and arms of the sea stretching far inland are unhappily absent. The west coast is low and sandy ; the southern occasionally bold and rocky. The chief capes are the **Cape of Good Hope** and **Cape Agulhas** (=Needles), which is the most southerly point in Africa. The chief inlets are **St. Helena**, **Saldanha**, and **Table Bays** on the west ; **False Bay** and **Algoa Bay** on the south ; **St. John's River** on the east coast.

(i) **Saldanha Bay**, the best and safest harbour in the Cape Colony, is one of the finest natural harbours in the world. But the country round it is not inhabited, owing to the want of water.

(ii) **Table Bay**, the chief harbour of the Cape, lies at the foot of Table Mountain, and is the port of Cape Town.

(iii) **False Bay** has, in its interior part, **Simon's Bay**, which is the principal South African station of the British fleet.

(iv) **St. John's River** is a port in Pondo Land, which, lying midway between East London and Durban, is likely to secure the greater part of the Kaffrarian trade.

**6. The Climate.**—Heat and dryness are the chief characteristics of the South African climate, which is said to be “the finest in the world.” But the heat is not excessive ; and the peculiar dryness and rarefaction of the atmosphere make it easily bearable. At Kimberley, the thermometer rises to  $105^{\circ}$  in the month of January. “Yet there is no place in the Colony whose people have more ceaseless activity, or more restless energy. Europeans work all day, heedless of the heat.” The coast-lands receive moisture from the ocean ; but, inland and on the plateaus, the giant buttresses of the mountains intercept the rain, and irrigation is necessary for the crops.

(i) There are in the Eastern Province of Cape Colony, three well-marked different climates : (a) a coast climate ; (b) a midland climate ; (c) a mountain climate. The first is that of the coast plateau—under 1000 feet high. The second is that of the midland terrace—between 1000 and 2500 feet in height. The third is that of the upper plateau—from 2500 to 5000 feet above the sea-level. The first—the coast climate—is warm, moist, and equable ; and its winter cold is moderated by breezes from the warm sea. The midland climate is cooler, drier, and more genial, and with a greater amount of evaporation. The third or mountain climate is very dry, very bracing—with a wide range of temperature—cold nights and hot days.

(ii) These three climates are to be found in an almost typical form : the first at **Port Elizabeth** ; the second at **Graham's Town** ; and the third at **Aliwal North**.

(iii) At **Wynberg**, near Cape Town, the mean summer temperature is  $63^{\circ}$  ; the winter temperature  $55^{\circ}$  ; and the rain-fall 34 inches. At **Colesberg**, on the high plateau (3600 feet), the mean summer temperature is  $69^{\circ}$  ; that of winter  $48^{\circ}$  ; and the rain-fall is only 18 inches a year.

(iv) “The day at Kimberley (on a high plateau) is characterised by a maximum of sunlight, a balmy buoyant atmosphere with a clear cloudless sky of the purest blue, and a cool night succeeds a warm day.”

(v) “There is an invigorating freshness about the winter season at the Cape which is equally delightful and beneficial ; the moment the rain ceases, the clouds rapidly clear away and the sky remains bright for several days.” July is the coldest month.

(vi) The prevailing winds are : The south-east, which blow from October till March ; and the north-west, which blow from April to September.

(vii) It is a remarkable fact that the physique of the descendants of Europeans—Dutch and English—has in no way deteriorated in South Africa ; has, indeed, in some respects improved.

(viii) "The scenery of the Colony is very fine, especially in the month of September. The fields are then covered with verdure, the hills and plains are brilliant with patches of bulbs and heather in full bloom, and all Nature is gay with the surpassing freshness and variety of spring. The air is then truly intoxicating, while the purity and transparency of the atmosphere is such as literally to astonish those who have been accustomed to judge of distance only through the medium of haze."

**7. Irrigation.**—The belt of coast on the edge of the colony is well supplied with rain. But inland, beyond this belt, agriculture cannot really succeed without the aid of irrigation. This means of watering the land is so important that measures have been adopted by the Cape Government to promote the extension of it. There is now an Irrigation Department, which carries on operations in many parts of the country. Water is obtained in two ways: by collecting and storing it in **dams**; and by boring, or sinking **wells** (called "fountains"). In some parts of the country, the average rain-fall for two years did not exceed four inches; and hence the standing necessity for irrigation. The complement of irrigation is heat and light; and of these there is an abundant supply.

(i) The most important irrigation work in South Africa is Van Wyk's Vley, in the division of Carnarvon. It is 19 square miles in extent, and will hold 35,000 million gallons of water.

(ii) In the county of Calvinia, there are immense tracts of the most fertile land, "which only need water to produce the most astonishing crops. A return of 130 bushels of wheat from one bushel sown is not infrequent."

(iii) "Over the greater part of the Karroo, water can be found by sinking wells."

(iv) "The work of irrigation is still in its infancy; but it is destined within no long period to change the face and the fortunes of the country."

"At last came the year of the great drought, the year of 1862. From end to end of the land, the earth cried for water. Man and beast turned their eyes to the pitiless sky, that like the roof of some brazen oven arched overhead. On the farm, day after day, month after month, the water in the dams fell lower and lower; the sheep died in the fields; the cattle, scarcely able to crawl, tottered as they moved from spot to spot in search of food. Week after week, month after month, the sun looked down from the cloudless sky, till the karroo-bushes were leafless sticks, broken into the earth, and the earth itself was naked and bare; and only the milk-bushes, like old hags, pointed their shrivelled fingers heavenward, praying for the rain that never came."—*STORY OF AN AFRICAN FARM.*

**8. Rivers.**—The ranges of mountains which run through the colony send down numerous rivers; but, in the dry season, these are useless for irrigation, and their mouths are stopped for ships by sand-bars. The most important on the west coast are the **Orange** (or **Gariiep**) with its tributary the **Vaal**, and the **Olifant**. Flowing to the south coast are



the **Breede**, **Sunday**, **St. John's** (through Pondo Land) and the **Great Fish River**. These, along with the **Great Kei**, flow south-east.

(i) The Orange forms the north-west boundary of Cape Colony.

"Its channel is hemmed in by precipitous walls of rock, between which at some points it descends in formidable cataracts. . . . So badly watered is this region that the traveller may be perishing of thirst, and yet may a torrent (tributary to the Orange), be flowing in its deep-cut channel a few hundred feet beneath him, inaccessible to human foot."

(ii) The **Vaal** divides the Orange Free State from the Transvaal.

(iii) "The **Olifant**, in times of flood, carries down great quantities of the rich Karroo mud, overflowing on the coast-land like a little Nile, and depositing its burden of sediment in a district which produces heavy grain crops."

(iv) "The **Great Fish River** is almost a periodical stream, seldom flowing in the winter season, but sometimes rising as much as twenty or thirty feet in a few hours, after thunderstorms in the mountains."

(v) The numerous rapid streams thrown down by the Drakenbergen into the Indian Ocean, fall by a succession of waterfalls and make their way to the sea through the most romantic and deep-cut gorges in the mountain walls.

(vi) "Many hundreds of square miles along the lines of drainage in the Great Karroo and other plains are at the present time converted, after rainstorms, into temporary shallow lakes, called **vleys** in the Colony."

9. **Vegetation**.—(i) Though so large a part of the soil of South Africa is dry and barren, the flora of the fertile districts is remarkably rich in varieties. Australia and South Africa are very similar in climate and in the character of their soils, but South Africa is much richer in its flora than any part of Australia. Indeed its flora is one of the richest in the world. The region of the Cape contains about twelve thousand species of plants; and that is about three times more than are to be found in all the vegetable zones of Europe taken together. "In no other country do bulbous plants and heaths exhibit so many beautiful varieties; of the latter several hundred varieties are described." The forests are confined to the temperate regions of the south, in fact, to the outward slopes of the ranges in the south of Cape Colony; and they cover an area of only 600 square miles. Among the useful woods in the Knysna and other western forests are: the **yellow-wood**, a kind of yew; **black iron-wood**; **stink-wood**, heavy, close-grained, durable, and the most valuable wood in the colony; **milk-wood**, a white wood used for wheel-work; the **kamassi**, which is suited for the finest engraving; and the **assegal** or Cape **lance-wood**. The eastern forests are larger than those in the west; and are found both in the mountain regions and along the



coast. The chief woods in these forests are : **sneezewood**, a wood as durable as greenheart ; **red pear** ; **boxwood** ; **saffronwood** ; **wild olive** ; and **Natal mahogany**.

(i) The forests were, till 1883, in danger of extermination by reckless and indiscriminate felling, by fire, etc. They are now under Government care, and managed by skilled officials.

(ii) "On the Port Elizabeth breakwater, where the attacks of the sea-worm (*terêdo navâlis*) are exceptionally virulent, sneezewood has successfully withstood the test of partial immersion for upwards of twenty years."

(iii) "Until quite recently, this valuable product (boxwood) has been sold as firewood at *five shillings* a load on the East London market in Cape Colony."

(iv) The south-east is distinguished by thickets of shrubs. These shrubs are woody plants of from 4 feet to 8 feet high, with a dull green or blueish foliage. They cover the "bush country" of the English settler.

(v) Most of the trees of Cape Colony are somewhat stunted. They are found chiefly in the gorges or "kloofs," and rarely exceed 30 feet in height.

(vi) There are four hundred species of **erica** (heath) in the South African bush ; and, "during the flowering season, the mountains clothed with heath present, from base to summit, one uniform mass of pink bloom."

(vii) The **silver-tree** gets its name from the silvery metallic lustre of its stem, boughs, and foliage. "These plants, with their finely chased ramifying branches, when glittering in the bright sunshine, look almost like the work of some skilful silversmith."

(viii) About one-third of the flora of Cape Colony consists of those plants which have "succeeded in adapting themselves to the dry climate of the Karroo by means of their succulent roots, stems, and foliage." The plains and the heights clothed with these plants are usually of a uniform ashen-grey colour. "But, after the rains, Nature suddenly assumes a festive garb. The stunted plants burst into blossom in all directions ; and the ground becomes draped in an endlessly diversified mantle of yellow, blue, and purple bloom."

(ix) "Hooks, thorns, and prickles are characteristic of many South African plants."

10. **Vegetation.**—(ii) Of the cereals, **wheat** is grown throughout the colony. In the hotter and sub-tropical parts, **maize** ("mealies") and **millet** (called "Kaffir-corn") are cultivated ; and **rye** gives its name to the "Roggeveld" (= Rye Plain) in the west. **Potatoes**, and all kinds of European vegetables and pot-herbs, prosper almost everywhere ; **pumpkins** and **melons** are produced in wagon-loads ; and **oats**, largely used in the form of oat-hay, are extensively cultivated. **Tobacco** is cultivated in many parts ; but the leaf is not well prepared. All kinds of fruits are grown ; and it is in the highest

degree probable that **fruit-canning** will be in Cape Colony and Natal one of the great industries of the future. But the most astonishing fact in the vegetation of the Cape is the immense productive power of the **vine**. The grape-vine of the Cape surpasses in productivity the vines of every other country in the world. In the coast districts, the grape-vine of the Cape produces five times more wine than the grape-vines of France or of Spain ; and, in the inland districts, it produces about ten times more. But, in the making of the wine, the Cape-grower fails.

(i) The chief fruits are apples, pears, figs, apricots, peaches, oranges, limes, pomegranates, quinces, bananas, walnuts, and almonds.

(ii) "There is a future for the fruit trade from South Africa to London ; as the South African seasons are the opposite of those of the Mediterranean countries which send us our largest import."

(iii) "The productive power of the vineyards of the Cape greatly exceeds that of any other viticultural country in the world." . . . "The making of wine is on the whole very primitive, in no way corresponding with the excellence of the grape."

(iv) The best farms combine "horn, corn, wool, and wine."

(v) "There are, perhaps, more cattle in South Africa, in proportion to population, than anywhere else in the world (except in Argentina and in Queensland), but there is an import of tinned meat ; and, although fruit rots upon the trees, there is an import of jam, while even butter and milk are also brought into the country."

(vi) "The Cape gooseberry grows nowhere else in the world. It has a peculiar and exquisite flavour ; and, being almost a weed, the supply of it is practically unlimited."

"Among the greatest pests of the whole of South Africa are the locusts. . . . They came in such vast numbers as to darken the heavens, so that through all this moving mass you were able to look straight at the sun, which, though at its zenith, became ruddy and beamless as at sunset. Their numbers were infinite, countless as the sands of the desert. Far and wide the whole land was filled with them ; the waters of the Vaal, covered with their bodies, became of a grey-yellow colour on the surface ; and the garden by the farmstead was in a few minutes left bare and leafless."—DR. MOHR.

**11. Animals.**—The wide plains of South Africa gave nourishment to a fauna more numerous and varied than that of almost any other part of the world. But most of them are now extinct : they have disappeared before the guns of the white man. Elephants and buffaloes are "preserved" (protected by game laws) in the forests between Knysna and the Sunday River ; but the lion, the hippopotamus, the rhinoceros, giraffe, eland, quagga, gnu, wild ostrich, etc., are no longer seen within the limits of Cape Colony. The gnu and the hartebeeste are still found in the plains of the Vaal. At the beginning of the present century, the districts in the north of Cape Colony

were "the hunting-ground of the earth." Nowhere else could the huntsman come across "such prodigious multitudes of large mammals; and the herds, especially of antelopes, could at that time be compared with clouds of locusts." Such troops and clouds of large game are no longer to be seen. The **baboon**, the **hyaena**, the **jackal**, the **tiger-cat**, and the **wild dog** are the chief terror of the farmers, as they prowl around the sheepfolds and the farmyards. "A few **leopards** still have their lairs in the dense thickets of the ravines," and are sometimes the occasion of considerable loss to the farmers. There is a considerable variety of birds: such as **cranes**, **flamingoes**, and **pelicans**; such, too, as the **secretary-bird**, the **republican-bird**, the **honey-bird**, and the **weaver-bird**. Birds of prey, such as **bearded vultures**, **eagles**, **hawks**, and **falcons** are numerous. In spite of these, **partridges** and **pheasants**, **guinea-fowl** and **quail** abound. There are many reptiles: such as large **toads** and **frogs**, **iguanas**, and, among venomous snakes, the **cobra da capello**, the **garter-snake**, and the **puff-adder**. Insects are often troublesome; flights of **locusts** eat up every green thing, swarms of **caterpillars** sometimes overrun a district; and man and beast are annoyed by **scorpions**, **tarantula spiders**, **hornets**, and **stinging ants**. **Honey-bees** are found everywhere—even in the deserts; and the **white ant** covers the ground with its houses, some of which are 4 feet in height.

(i) "In the island of Ceylon, where the elephant finds an abundance of food and water, a very small number only are provided with tusks; but in Southern Africa all possess these organs, which they employ to clear away the dry sands of the river beds down to the underground reservoirs, and to slice from the stems of acacias and other trees strips of bark which they slowly masticate."—RECLUS.

(ii) "The giraffe, the zebra, the quagga, the buffalo, the gnu, and most of the twenty-seven species of antelopes which formerly inhabited the now settled districts of Southern Africa, have retired farther north to the regions of the Kalahari Desert, to Namaqua Land, and to the Transvaal."—RECLUS.

(iii) "Cape Colony offers attractions to sportsmen. Deer of many kinds, partridges, pheasants, hares, quail, and snipe abound. Cape leopards have not yet died entirely out; many elephants are still found in the Knysna forests, and other places; and buffaloes in the Kowie Bush (near Port Alfred). There are close seasons."

(iv) The republican-birds live in colonies, and build enormous nests covered with a sort of roof.

(v) The secretary-bird seizes a snake and kills it with a blow of its wing; or it carries it aloft in the air, drops it from a great height on rocky ground, and so

breaks its vertebrae. This bird, however, though useful as a snake-killer, does a good deal of damage by destroying ostrich-chicks and young game-birds.

(vi) "Upwards of 40 varieties of edible fishes are caught in the seas surrounding the colony."

**12. Domestic Animals.**—Cape Colony is very rich in domestic animals—especially in sheep, both the fine-woolled merino and the fat-tailed sheep. Angora goats, producing mohair, flourish on the Karoo; and the Midlands and East are renowned for horses, cattle, and ostriches.

**13. Minerals.**—The chief mineral products of the Cape are diamonds, coal, and copper. There are also, in greater or less quantities, gold, salt, sandstones, and marble. South Africa is like Australia not only in soil and climate, but also in the geological character and distribution of its rocks. In the Transvaal (late South African Republic) there are many quartz reefs of the same character as those which bear gold in Australia; and it has been found that the Transvaal rocks also bear gold. "The South African gold-fields are now giving the best proof that they are a great and growing reality."

(i) Gold has been mined for some time in the Knysna district (in the extreme south of Cape Colony). But by far the richest gold-mines are in the Transvaal; and the richest parts are the Witwatersrand Fields, which, in the year 1912, produced about £38,000,000 worth of gold. Johannesburg is the chief town on the Rand.

(ii) There are large deposits of coal in the Stormberg Range. The coal is found in the sides of the mountains; no shafts require to be sunk; and the seam is followed and worked by tunnelling into the hillside.

(iii) Iron ores of great richness are abundant in many parts of the country; but there has as yet been no instance of South African iron worked by South African coal.

(iv) Copper is found in all parts of Namaqua Land. The largest mine is that of Ookiep, which ships its copper at Port Nolloth, on the west coast, by a railway ninety miles in length.

(v) Kimberley, in Griqualand West, contains the richest diamond-mines in the world.

(vi) There are large and valuable salt pans throughout the colony.

"The 'Pan' is a depression about forty feet below the adjacent country; and in the bottom are alternate crusts of salt of from one to ten inches in thickness, and black mud. The salt is dissolved by rain; and when redeposited on evaporation, it is scraped off with spades."

(vii) The marble found is "of beautiful colour and handsomely mottled."

The resources of South Africa are simply enormous, and all that has been done yet to develop them is but a faint earnest of what will be done. The gold industry has at last been placed upon a proper footing, and the return already amounts to some forty millions a year. The greater portion of the known gold-fields lies as yet untouched, waiting for the railways which must soon reach them. Silver-mining is being prosecuted with vigour, and promises the most excellent results. Coal of good quality exists in many places in large quantities, and other minerals abound. Large industrial populations will spring up, and

the prosperity of those who follow agricultural and pastoral pursuits must, with the increase of railway communication, be assured. There is room for any number of men to settle in the country, and the more of the right sort who will leave the overcrowded British Islands and establish new homes over there the better, but they must come as colonists and make up their minds to be South Africans.—*FORTNIGHTLY REVIEW*.

**14. The Inhabitants.**—Most of the inhabitants are of African race—**Kaffirs** and **Hottentots**; and only about thirty per cent. are whites of Dutch, English, French, or German origin. The Kaffirs are increasing rapidly under British rule; and even the Hottentots of the colony have grown in numbers.

(i) The **Kaffirs** are a dark-brown, powerful, handsome race, given mostly to a pastoral life. Many of them have adopted European clothes and customs. (The word *Kaffir* means unbeliever, and is an Arabic name given to all non-Mohammedans.)

(ii) The Kaffirs are really a tribe of the great **Bantu** family, who fill the continent between Cape Colony and the Equator, and who consist of Kaffirs, Zulus, Basutos, Bechuanas, Mashonas, etc.

(iii) The **Hottentots** are a small yellow-brown people, indolent, light-hearted, and incapable of civilisation. Their language (now almost extinct) was remarkable for its “clicks.”

(iv) The Eastern Province of the Colony, which has been more recently settled, is an English country, the farmers and traders being mostly Englishmen. The Western Province is occupied chiefly by the Dutch-speaking descendants of the old settlers, with a sprinkling of English farmers. The Dutch language is the general means of communication between the farmers—Dutch and English—and their native servants.

(v) Two kinds of Dutch are spoken in Cape Colony—pure Dutch and colonial Dutch (*de Afrikaansche taal*).

(a) Pure Dutch is only heard in the pulpit.

(b) The ‘taal,’ or common tongue, is the speech of the farmers to each other and to their servants. It is a degraded patois, with no grammar.

(vi) The mixture of races in South Africa is very remarkable. “The seaport towns are chiefly English and Malay, the Malays being employed as artisans. Jubilee taverns, Wesleyan chapels, and Young Men’s Christian Associations mingle with Malay and Indian mosques in the towns; while in the country districts, generally speaking, a Dutch farming population is surrounded by South African black and Hottentot servants.”

**15. Produce, Trade, etc.**—The wide open plains of the interior are admirably fitted for pastoral life; and **sheep-rearing** is the most important industry of the colony. With the exception of diamonds, **wool** is by far the most valuable article of trade; and its value is as great as that of all the other exports put together. Next to wool, the chief exports are **ostrich feathers**, **hides**, **copper ore**, and **goat’s hair**, or **mohair**.



(i) In 40 years, diamonds to the value of £150,000,000 have been found, and about 6 millions' worth are now exported every year. The export of wool is over £2,000,000. The export of copper ore averages about £500,000 annually. The amounts of wine and grain exported are insignificant.

- (a) The largest diamond mine in South Africa is the **KIMBERLEY MINE** at Kimberley, on the river Vaal, the capital of Griqua Land West. It is an immense opening in the ground, like a "vast irregular crater." At one time all the workings were open to the air and daylight; but now the mining is underground. Shafts are sunk, and from them horizontal galleries, or levels, are cut into the "blue ground," as the diamondiferous deposit is called.
- (b) The diamonds are found in what are called "pipes" or natural shafts, which are supposed to be the ancient craters of extinct volcanoes. The diamond-bearing soil in this pipe is, for the depth of 100 feet, "yellow ground," soft and friable; and this is followed by an unknown depth of "blue ground," hard and compact. It is the "blue stuff" that contains most diamonds.
- (c) Within a space of about 11 miles in circumference there exist four diamond-bearing pipes—**BULTFOUNTEIN, DE BEER, DU TOIT'S PAN, and KIMBERLEY**. The last is the richest diamond-bearing ground in the world. Thus a circle about  $3\frac{1}{2}$  miles in diameter encloses the whole of the "Diamond Fields."
- (d) The finest diamond ever found in South Africa was the "**PORTER RHODES**," which was valued at £60,000.

(ii) The ox of S. Africa is very largely used as a draught-animal, both in wagons and in the plough. "The Cape horse is a hardy and capable animal with great power of endurance."

(iii) Ostrich feathers are not now got from wild ostriches, which have to be hunted. Ostriches are now bred and reared like domestic fowls. "Cape farmers buy and sell ostriches as they do sheep; fence their flocks in, stable them, grow crops for them, study their habits, and cut their feathers, as matters of business." Whatever the changes of fashions in other articles of women's dress, ostrich feathers are always in demand, and the yearly export of feathers ranges from one to two million pounds' worth. In 1909 the value of the export reached well over £2,000,000. In the early days of ostrich rearing, £200 was readily paid for a pair (in more than one instance even £1000), and £10 was the standing price for a chick a few days old.

- (a) An **OSTRICH FARM** is a very interesting sight. One, in the Eastern Province, consists of 13,000 acres, and supports 600 ostriches—in addition to 400 cattle. The whole farm is fenced; and is sub-divided into numerous "camps," also fenced. "In one of these camps we find an old Hottentot with about 30 little ostriches only a few days old around him. These have all been hatched in the 'Douglass Incubator.' He is acting as nurse to them, cutting up lucerne for them to eat, supplying them with fine gravel to fill their gizzards with to grind their food, breaking up bones for them to let them get a supply of phosphates, and giving them wheat and water. At sun-down he will bring them back to the incubator for warmth; or, should the weather change and rain come on, he will be seen hurrying home with his thirty little children in his rear, following him to a warm well-lighted room, with a clean sanded floor." If the young ostriches are reared outside, they are in danger of wild beasts; and a single jackal has been known to destroy a whole brood in a night.
- (b) "Here we come to another camp in which we are told there is a nest; and, as we enter, a heavy thorn bush is given us, and we are told that, if the male bird charges, we are to hold it up to his eyes. . . . We are startled by three tremendous roars behind us, and have only just time to put up our bush, when the infuriated cock charges down as fast as a horse can gallop, making every nerve in our body shiver with fear, as we remember having heard of broken ribs and legs, and men killed by savage male birds. We follow the example of our conductor, and keep the bush at a level with the bird's eyes, when, just as he reaches the bush, he stops suddenly. . . . We arrive at the nest without accident; when, to our astonishment, our conductor suddenly lays his bush down, and handles the eggs. The nature of the infuriated male bird has quite changed; a moment ago he was trying with all his might to get at us and kill us; he now stands a dejected, submissive creature, uttering a



plaintive note and beseeching us in every possible way not to break his eggs. The nest is merely a scratched hollow in a sandy place, with 15 eggs in it, weighing three pounds each. On these the parent birds must sit for six weeks, the cock by night and the hen by day. The eggs are exposed to many risks of destruction by jackals, baboons, and carrion crows, or by heavy rains filling the nest with water. The carrion crows are very ingenious in their method: their bills are not strong enough to break the shell; so they take a good-sized stone in their claws, rise to a considerable height, and then drop it on the eggs."

(c) Dairy farming is most successfully carried on in conjunction with ostrich farming. All the labour on an ostrich farm is done by natives; the natives are exceedingly fond of milk; and, as long as they can get plenty of milk, they will work hard and cheerfully.

(d) "In 1833, several shipments of ostriches took place to South Australia, to Argentina (in South America), to Algeria, and to California. The Cape Parliament, fearing that the Colony was in danger of losing a lucrative monopoly, imposed an export duty of £100 on every ostrich and of £5 on every ostrich egg exported."

(iv) **Copper ore** is found in Little Namaqua Land and shipped at **Port Nolloth**.

(v) "South Africa is at the present moment enjoying a remarkable growth of prosperity which may prove permanent. Its main cause is the extraordinary increase in the productiveness of the diamond-mines in Cape territory, and of the gold-mines in the Transvaal (which for the present benefit Natal, as yet the chief outlet for the Transvaal trade), and in the yield from wool. The improvement in the position of the South African Colonies is affecting their wheat production, and must soon call forth a large production of coal, of which Natal has a magnificent field."—DILKE.

**16. Exports.**—(i.) The most valuable product of Cape Colony is, at present, **diamonds**. Next to this comes **wool**; and, indeed, the whole of this Colony may almost be regarded as one vast sheep-farm. The product which comes third in value is **ostrich feathers**, which, despite the fluctuation of fashions, must always be in steady demand. Next come, in order of value (which, however, is liable to vary) **hides and skins**, Angora goat-hair or **mohair**, and **copper ore**. There is also a very large export of **gold**, but that is the produce of the Transvaal.

(i) There are about 17,000,000 **sheep** in Cape Colony.

(ii) There are more than 7,000,000 goats, most of which are of the Angora kind.

(iii) The chief crops raised are **wheat** and **maize** (mealies). But the amount of food produced is much too small for the population; and provisions to the amount of about £3,000,000 a year have to be imported.

(iv) The sheep-farms of the Colony are very large—from 3000 to 15,000 acres. Those in tillage are comparatively small.

**17. Exports.**—(ii.) The export of **diamonds** is regulated by the owners of the mines, so that the diamond-market may not be swamped, and the price of the precious stones fall. But the annual value of this export generally amounts to over £6,000,000. The yearly export of **wool** amounts to something like one-third of this.

**Copper ore** is found and exported, chiefly from Port Nolloth, to the value of about £500,000. The annual value of the export of **hides** and **skins** amounts to about £700,000. The value of the **ostrich feather** export is generally about double this. The value of the **Angora hair** exported amounts to something over £750,000.

(i) More than £150,000,000 worth of diamonds has been exported from the Cape within the last forty years.

(ii) Most of the **copper** comes from the Ookiep Mines, in Namaqua Land.

(iii) The exportation of **Angora hair** is almost a monopoly of the Cape Colony.

(iv) The value of the **ostrich feathers** exported in 1882 was over a million. It was in 1903 £945,000. The figures continually fluctuate with the fashions.

**18. Imports.**—The two chief imports of the Cape Colony are **textile fabrics** (for the purposes of dress), and also different kinds of **food and drink**. The value of the former amounts to about £5,000,000; of the latter to a little over £4,000,000.

The feature of the import trade into the Cape Colony is the large preponderance of imports coming from the United Kingdom principally and from British possessions in the next place. It is only the United States who at all seriously challenge our command over the import-markets of this province of the South African Union.

**19. The Towns.**—There are no very large towns in the Colony; but there are a good many small towns. There are only four with a population of more than 20,000. These are: **Cape Town**; **Kimberley**; **Port Elizabeth**; and **East London**. The only others of any importance are **Graham's Town**; **King William's Town**; and **Graaff-Reinet**. The chief ports are Cape Town, Port Elizabeth, and East London.

(i) **Cape Town** (67) is the capital of Cape Colony. It is very much like a thriving English provincial town. Gas, tramways, and railway stations, give it the air of a European city. It stands at the foot of a remarkable hill with a flat top—as if half the summit had been cut off—called **Table Mountain** (3800 ft. high). When a south-east wind blows, it rises against the sides of the mountain into colder regions; the moisture it bears is condensed into mist; and the flat top of the mountain is covered with its “tablecloth.” Sometimes this mist is driven down the slopes in a perfect “Niagara of Vapour.”

(a) **TABLE MOUNTAIN**, rising in its solemn majesty 3800 feet, with its stately companions, **Lion's Head** (a miniature **Arthur's Seat**)—the slopes of its neck covered by the beautiful satin-leaved silver-tree—and the **Devil's Peak**, forms a strikingly grand background to the picturesque town which nestles at its base. At their bases these three mountains are still united, although weather-wearing, by means of constant torrents of rain and tempest, has worn them into three seemingly detached masses.

- (b) "In all the world there is perhaps no city so beautifully situated as **CAPE TOWN**; the grey cliffs seem to overhang it like a precipice; from the base a forest of pines slopes upwards wherever trees can fasten their roots, and fills the entire valley to the margin of the houses."
- (c) "The Cape Parliament has one of those handsome buildings, arranged in close imitation of St. Stephen's, which interest British politicians on their travels throughout the British world. Botanical gardens, as beautiful as those of Australia, display magnificent foliage in lovely scenery, and remind the traveller of Sydney. When the prohibition of careless smoking is evaded, bush fires rage in South Africa in the summer months as they rage throughout Australia; and the smoke throws a pall over the country as it does in the dry continent of the South Seas."—**DILKE**.
- (d) "**CAPE TOWN**, like Sydney and Melbourne, in the latter part of a summer's afternoon, is a city of the dead; and its inhabitants, merchants and clerks alike, mount the hill to their suburban homes."

(ii) **Kimberley** (30—but, indeed, with a varying population), in Griqualand West, is the capital of the Diamond Diggings. The best diamonds now come from here. They are found in an igneous blue clay. The mines are now worked by one great monopolist company.

(iii) **Port Elizabeth** (32), on Algoa Bay, "The Liverpool of South Africa," is the busiest trading-place in the colony. The chief exports are wool, skins, and mohair. It is 436 miles (30 hours by steamer) from Cape Town.

(iv) **Graham's Town** (14) lies north-east of Port Elizabeth, and is the official capital of the Eastern Province. It is the most English town of South Africa, and the only town of importance that does not contain a Dutch church.

"The heights above the city of Graham's Town command a magnificent view of characteristic frontier scenery—an exquisite landscape of tumbled hills and dales, variegated with verdant slopes and wooded heights, and backed by massive mountains, whose tops fade into the blue haze on the far distant horizon."

(v) **King William's Town** (9) stands in the heart of the rich territory once called British Kaffraria—a rolling pastoral country of great beauty. Its seaport is **East London** (21), 28 m. away, which is the outlet for much of the produce of the Orange Free State, Griqualand East, etc.

(vi) **Graaff-Reinet**, near the Sunday River (where it leaves the Snowbergs), is the oldest and largest of the towns in the midland districts. It is the centre of a sheep and ostrich district; and manufactures some coarse brandy, and raisins. It stands 2476 ft. above the sea, and has a bracing climate; but it suffers from droughts. The houses have vineyards, gardens, or orchards round them; and the contrast of these with the surrounding arid Karoo plain, has given to the town the title of "Gem of the Desert."

(vii) **Paarl** and **Stellenbosch** are two old, picturesque, quaint Dutch towns, in the heart of the wine-growing district of the Western Province.

**20. Communications.**—Before the discovery of the rich diamond mines, South Africa was very poorly supplied either with roads or with railways. When the Kimberley mine came into operation, railways were pushed from the three chief ports—Cape Town, Port Elizabeth, and East London. There are in the colony some 3500 miles of railways; and there are also over 8000 miles of main roads and of side-roads, all in fair condition. The railways consists of three

systems: the Western System; the Midland System; and the Eastern System. The Western System starts from Capetown; the Midland from Port Elizabeth; and the Eastern from East London. In addition there are numerous branches (built or building) connecting the trunk lines with each other. The Colony owns about 7500 miles of telegraph line.

Before the days of railways and good roads, travelling into the interior was a work of extraordinary difficulty. Huge heavy wagons "grinding and groaning at every jolt," drawn by from 16 to 20 oxen, were driven over rough and stony tracks full of deep ruts, across sandy deserts, through thorny scrub, down into steep kloofs, across rivers—which the oxen had now and then to swim. Here and there the "road" ran up the steep side of a mountain; and each wagon had to be hauled up separately by ten or twelve pairs of oxen. "At times the vehicles had even to be unloaded, taken to pieces, and transported piecemeal over the rocky heights." At night the trekkers rested; a camp was formed; huge fires were made round it to scare away the wild beasts; and music and dancing were kept up till late in the night.

N.B.—As all the railways in South Africa are connected, they will be treated as a whole in the following paragraph.

**21. Railways of South Africa.**—There are now more railways in South Africa than in any other part of the Continent. The **Western System** leaves **Capetown** and runs to **Kimberley** (647 miles), and on to **Mafeking** (875 miles). There it joins the Rhodesian railway system, and continues to **Bulawayo** in Rhodesia (1374 miles), whence a line has crossed the Zambesi. This is the first link in the projected Capetown-Cairo route.—The **Midland System** starts at **Port Elizabeth**, with two branches which run respectively through **Graaff-Reinet** and **Cradock**, and meet at **Rosmead Junction** (243 miles). From a little north of this (at **Naauppoort**) a branch is sent out north-west to **De Aar** junction on the Western System. From **Rosmead** the Midland line runs on north to **Bloemfontein** (the capital of the Orange River Colony—450 miles from Port Elizabeth), and thence, after crossing the Vaal, meets a line which takes it through **Johannesburg**, **Pretoria**, the Transvaal capital (740 miles from Port Elizabeth), and 177 miles further north to **Pietersburg** in Central Transvaal.—The **Eastern System** runs from East London through **Queenstown** and **Stormberg Junction** (whence it connects with the Midland at **Rosmead**), and joins the Midland again at **Springfontein** (O.R.C.).—In **Natal** the main line runs from **Durban**, on the coast,

through **Pietermaritzburg** and **Ladysmith** (the junction for **Harrismith**, O.R.C.), and strikes away north-east to **Johannesburg** (483 miles from Durban). From **Delagoa Bay**, in Portuguese East Africa, a line runs nearly due east to **Pretoria** (350 miles). Lastly, from the port of **Beira**, also in Portuguese East Africa, a railway runs to **Salisbury**, the capital of **Mashonaland** (380 miles), from whence it is connected south-west with **Bulawayo** (285 miles).



(i) To sum up—the South is connected with the interior by three lines, starting from Capetown, Port Elizabeth, and East London. The East is connected with the interior by three lines, starting from Durban, Delagoa Bay, and Beira.

(ii) The Eastern routes have the advantage of (a) shortness, and also (b), on the Durban-Johannesburg and Delagoa Bay-Pretoria lines, of being able to get coal en route. But (a) the climate of the two starting-points of Delagoa Bay and Beira is unhealthy, and (b) all the three Eastern ports lie farther away from the steamship-routes from Europe.

(iii) The three Southern ports (a) lie nearer the steamship-routes, and (b) all enjoy a healthy climate. But (a) they are nearly twice as far away from the interior as the Eastern starting-points, and (b) except on the Eastern Colonial system (from the Indwé coal-mines), there is no coal near the lines, and coal has to be imported from the **Vereeniging** collieries on the Southern Transvaal border, or even from Europe.

## THE CONDITION OF THE UNION OF SOUTH AFRICA

1. **Area** . . . . . 473,000 square miles

2. **Population** . . . . . 5,973,394

The legislative capital is **Capetown** in the Cape of Good Hope Province, but the seat of the executive government is at Pretoria in the Transvaal.

3. **Exports (1912)** . . . . . £62,974,219

The principal exports in 1912 were gold—far in front of all—£38 m.; then diamonds £9 m., wool £4·7 m., ostrich feathers £2·6 m., hides £1·6 m., and coal £1·1 m.

4. **Imports (1912)** . . . . . £38,838,960

The chief imports were food and drink £6·3 m., cotton manufactures £3·2 m., apparel £2·7 m., and manufactures of metal, wood, and textiles of all kinds.

5. **Manufactures** . . . . . Very small

There are manufactures of furniture (some of the native woods being very beautiful), soap, lobster canning, woollens, leather, etc.

6. **Import Trade with Great Britain** . . . . . £21,869,810

The above figures represents 58 per cent. of the Union's total import trade. The U.S.A.'s share was only 8 per cent.

7. **Communications (internal)** . . . . . Good, and increasing

(i) There are over 8000 miles of good road.

(ii) There are 7848 miles of railway.

Cape Colony has direct railway communication with the interior from her three principal seaports.

(iii) There are 15,000 miles of telegraph line.

8. **Communications (external)** . . . . . Sufficient

(i) The **Union Castle Line** runs large vessels every week to Cape Town, Algoa Bay, Durban, Delagoa Bay, etc.

(ii) The **Clan Line** runs from Glasgow to Cape Town and Durban; and the **Shaw-Saville** steamers, etc., call at Cape Town en route for New Zealand.

(iii) Distances from London—to Cape Town, 6181 miles; to Algoa Bay, 6609 miles; to Durban, 6993 miles; and to Delagoa Bay, 7292 miles.



22. NATAL.—The Colony of Natal includes the native territories of Zululand and Amatongaland, and in 1902 the Transvaal districts of Utrecht and Vryheid were added to it. It is bounded on the north-east by Portuguese E. Africa, on the west by the chain of the Drakensberg, and in the south by Cape Colony. It lies between the eastern rim of the great interior Table-land of South Africa and the Indian Ocean. From the Drakensberg the land descends in steep steps and gentle slopes, down to the level of the sea. It is a goodly land of fertile valleys and picturesque hills, noisy with waterfalls and clear sparkling streams. Excluding Zululand and Amatongaland, Natal is about the same size as Scotland ; but has a population of only 1,194,000, of whom about 98,000 are whites. The land rises by terraces to an elevation of 4000 ft. above the sea-level. The soil is very fertile ; and there is excellent grazing on the mountains. The chief crop is “mealies” ; and this grain forms the principal food of the native population. The chief industry is sheep-rearing ; and the chief export, **wool**. But the climate being hotter than that of the Cape, **sugar** is also largely grown on the coast-strip and exported. Natal, however, not only sends away its own produce ; but is the carrier of the **wool, hides, feathers, and gold** sent down from the inland provinces of the Transvaal and the Orange Free State. The main line of railway starts from **Durban**, and runs through Maritzburg (the capital), Ladysmith (celebrated for its successful defence against the Boers, 1899-1900), past the coal-mines of Dundee, and ends at **Johannesburg** in the Transvaal. The capital is **Pietermaritzburg**, commonly called **Maritzburg** (29) ; and the port, **Durban** (70).

(i) Natal received its name from Vasco da Gama, who sighted the headland at the entrance to the port of Durban on Christmas Day 1497. From the *Dies Natalis* he named it the *Terra Natalis*, now *Natal*.

(ii) Natal is often said to be the real home of the British flag in South Africa. . . . The Natal coast, and a strip of land, 8 to 10 miles in width, is planted with sugar, coffee, arrowroot, bananas, and cotton, and is well watered.

(iii) “The vegetation of the sea-board of Natal is tropical ; yet, in spite of the exotic appearance of its bananas and its sugar-canes, and in spite of the larger proportion of coloured people than in the more temperate colony, Natal has more the air of a British possession. Durban, notwithstanding the swarms of Zulus and Indians in its streets, looks like an English town.”

(iv) Speaking generally, there are in Natal three levels, with three different climates, and three different kinds of produce. (a) There is the **Coast District** (8 to 10 miles broad), well watered and well wooded, with a semi-tropical climate, which grows

sugar, tea, coffee, bananas, etc. (b) A little above this the **Midlands**, with rich black and red loamy soils, and a warm-temperate climate, which grow maize, wheat, and other European cereals. (c) Last of all come the **Uplands**—bare of trees, but covered with thick green pasture, which are mostly grazing grounds for sheep, cattle, and horses. As regards fruit: (a) the Coast District grows the **banana**, **mango**, **pine-apple**, etc.; (b) the Midlands the **guava**, **lemon**, **lime**, **orange**, etc.; (c) the Midlands and Uplands grow **apples**, **pears**, **apricots**, **figs**, etc. **Almonds**, **currants**, **gooseberries**, **plums**, **quinces**, etc., grow in the Uplands only; while the **melon**, **mulberry**, **peach**, **pomegranate**, and **strawberry** grow everywhere.

"PINE-APPLES cost 1d. to 3d. each; and other fruits are equally cheap, prices often only covering the cost of gathering and carriage to market."

**23. Products.**—Natal, though a country only about the size of Scotland, and with a population of just over a million (only 98,000 of whom are Europeans), is a rising colony, with a commerce which grows with astonishing rapidity. The leading crop grown for export is **sugar**; but maize, wheat, and other cereal and green crops are largely grown for consumption at home in the colony. The colonists own about  $1\frac{1}{2}$  million **sheep**; there are over half a million horned **cattle**; and the numbers of horses and goats are continually increasing. There are large coal-fields (centres—Dundee and Newcastle) in the northern part of the country; and ironstone of rich quality lies quite close to the coal-fields.

(i) **Tea-planting** has been lately introduced into Natal.

(ii) The railway was made up to the coal-fields in 1888; and the out-put of the Dundee and Newcastle mines increases every month.

**24. Exports.**—The chief exports are **wool**, **hides**, and **coal**; and at a great distance behind these, **mohair**, and **raw sugar**. The total value of these exports is about three millions sterling.

(i) The export of **wool** to Great Britain amounts to about £1,000,000.

(ii) "From the position of the port of Natal, as the nearest gateway from the south-east coast to various parts of the interior, along a healthy line of communication, its chief towns have long been emporiums for what has been termed the 'overberg' or inland trade."

**25. Imports.**—Natal buys from Great Britain every year goods to the value of between £3,000,000 and £4,000,000. The feature of Natal's import trade, in common with the other provinces of the Union, is that it buys manufactures, like clothing, cottons, and iron manufactures which it cannot produce for itself. But as it grows sugar and tea and is a well-watered farming country, it does not need to import so much food.

### THE UNION OF SOUTH AFRICA

25A. The Union of South Africa includes the two old British colonies of Natal (with Zululand) and the Cape Colony, now officially styled the Cape of Good Hope Province, and two States which were once independent Dutch republics, the Orange Free State and the Transvaal. In 1899 the two Dutch States went to war with Great Britain, and the struggle, conducted with great tenacity on the part of the Boers, lasted for nearly three years. Shortly after its close, responsible government was granted both to the Transvaal and to the Orange Free State, which became known for a short time as the Orange River Colony. A fuller and an even more generous measure of self-government was, however, in store for South Africa. In 1909 the Imperial British Parliament passed an Act establishing a self-governing Union of South Africa within a year, and in 1910 the Union was brought into being. The four provinces, as they were now styled, were united into one government under the nominal sovereignty of a Governor-General appointed from home. Thus, with the exception of Basutoland, which remains a Crown Colony, all South Africa, south of the Limpopo, governs itself as a whole. The several members of the Union retain some measure of self-government, but in the great questions, such as defence, the railways, the management of the coloured people, and the imposition of customs duties, the Union Parliament is supreme. The Parliament meets at Capetown, but the seat of the executive government is in Pretoria.

(i) Rhodesia at present stands outside the Union, but the Act contains a clause enabling it to be admitted, if it wishes, later on.

(ii) The loyalty of the Union was triumphantly proved in 1914 by the suppression of a rebellion against the British supremacy which German intrigues had fomented.

**26. The Orange Free State.**—The Orange Free State, once an independent Dutch republic, became a British Crown Colony in 1900, during the course of the great Boer War. It was then renamed the **Orange River Colony**. The new colony is about as large as England (without Wales), and the 1911 census showed a population of 528,000, of whom over 175,000 were white—principally Dutch Boers (=farmers). It lies between the Vaal, the Caledon, and the Orange Rivers; and it has the Transvaal on the north, Cape Colony on the west and south, and Natal and Basutoland on the east. The Orange River Colony is a high and level plateau. Almost the whole of its surface consists of rolling plains, occasionally diversified by *kopjes*, small boulder-strewn hills which spring abruptly out of the level. Towards the east and south-east, where the country abuts on the Drakensberg chain, it is more mountainous. As the country lies to the leeward of the great Drakensberg range, the **climate** is necessarily a dry one on the whole. Its latitude makes it a hot country, but at the same time the heat is tempered by the general elevation (4000 to 5000 feet above the sea); and also, owing to the elevation, the winter cold and sudden changes of temperature are keenly felt.

(i) The great plains are almost entirely destitute of trees save along the river banks, which are often clothed with willow and the fragrant mimosa. The plains are, however, fairly well grassed; but drought or winter-cold often shrivel up the grass, and the wind rolls it up into huge balls of natural hay.

(ii) "The **rainfall** is moderate, probably about 22 inches, and occurs principally during the late summer months in the shape of violent thunderstorms."

(iii) "Most of the water, however, is rapidly carried off by the deep-cut river-beds, which are generally thirty or forty feet below the level of the surrounding country, and speedily drain all moisture from their vicinity." The south-east is the best watered district.

(iv) The Orange Free State has proportionately the largest white population of any part of South Africa, more than a third of its inhabitants being Dutchmen; and this territory is the most completely colonised and settled of all in South Africa. The ancestors of the Boers left Natal when it was declared a British Colony, and set up a government for themselves in 1854. When the Boer War broke out in 1899, the Boers of the Orange State chose to cast in their lot with the Transvaalers, and their country was accordingly annexed by Great Britain in 1900.

**27. Resources and Towns.**—The Orange Free State is essentially a pastoral country, and its staple industry is the breeding of **horses, cattle, and sheep**. Ostrich-farming is also a lucrative pursuit. Hence the chief exports are live **cattle and sheep, horses, wool, hides**

and **skins**, and **feathers**. Large crops of **wheat** and other cereals are raised in the moister south-east, but the difficulty of storing water on some portions of the dry tableland prevents the farmers raising enough grain even for themselves. **Coal** is mined near Kroonstad and Heilbron, and is known to exist at Bethulie, near Springfontein junction. There is also a most important **diamond-mine** at **Jagersfontein** in the south-west, which produces stones of the finest quality at the rate of about £400,000 per annum. The towns are all but one under 10,000. The chief are **Bloemfontein**, the capital, **Harrismith**, **Kroonstad**, and **Jagersfontein**.

(i) Bloemfontein (26) stands upon a plain surrounded by low hills, and enjoys a wonderfully keen and bracing climate. It lies on the Port Elizabeth-Johannesburg railway. **Kroonstad**, in the north, is a busy little village and railway station in the midst of a rich farming district. **Harrismith**, in the east, is connected by rail eastward across the "Berg" with Ladysmith in Natal, and westwards with Bloemfontein and Kroonstad. It is an important trading centre, is well supplied with water from the mountains, and is a collecting point for the well-watered country abutting on the Drakensberg.

(ii) The export and import trade of the Orange River Colony, being an entirely land-locked state, is carried on both through Durban and Port Elizabeth. The mid-land railway system of Cape Colony runs right through it. The trunk line is met by extensions from Harrismith on the east and from the Kimberley line on the west.

**28. The Transvaal.**—In 1900 the **Transvaal** (then called the South African Republic) was annexed as a colony of the British Crown. The area, including Swaziland on the south-east, is 119,000 square miles—very nearly equal to that of the United Kingdom. The population was found in the 1911 census to number 1,686,000. Of these, 420,000 were whites—a quarter of them Dutch Boers, and the other three-quarters the so-called *uitlanders*—i.e. white people of European origin, who were most of them British subjects.

(i) The Transvaal was founded by Boers (*voor-trekkers* or pioneers), who originally emigrated from Cape Colony, and its independence was recognised by Great Britain in 1852. In 1877 it was considered desirable to annex the country to the British Crown, but in 1881, after the battle of Majuba Hill (27th February), Great Britain practically restored to the Transvaal Boers their independence. In 1899 the Boers went to war with Great Britain again, and their country was annexed to the British Crown.

(ii) "Between the Australian colonies and the South African colonies of England there are some considerable resemblances and two startling differences, political and social. The resemblances are chiefly those of climate, soil, and production. Australia and South Africa are dry, wool-growing, grape-growing, gold-producing countries. The main differences are two. While Australia is a continent settled and almost



solely inhabited by natives of the United Kingdom, South Africa is a Dutch colony which we first conquered in the Stadtholder's name from his soldiers; then conquered a second time, and lastly bought: all three against the will of the local Dutch population. In the second place, South Africa is a country with an overwhelming preponderance of black people."—DILKE.

**29. Surface and Climate.**—The Transvaal lies between the Limpopo and the Vaal, and has the Bechuanaland Protectorate on its western, and Portuguese East Africa on its eastern side. From the Vaal the ground rises at the **Witwatersrand** (*rand*=ridge or range) to an elevation of 6000 feet, and thence there is a gradual fall northward to the **Limpopo** river. The southern and eastern portions of the state are very mountainous (4000 to 7000 feet above the sea); indeed, the eastern mountains are the continuation of the mighty Drakensberg chain of Cape Colony and Natal. Like the Orange Free State, the Transvaal forms part of the great South African plateau, and most of its surface is composed of open upland, over which sweep strong winds, unchecked by any belts of forest. The climate of the high regions is a healthy one, with a cold winter and a hot summer, though the heat of summer is tempered by easterly breezes and fairly copious rains. But the rain is only copious on the eastern side of the country, and the interior and west is on the whole very dry.

(i) The Transvaal forms part of the great South African tableland. It falls naturally into three divisions: (a) The eastern and southern parts of the country (between the Vaal and the Witwatersrand) consist of a stretch of high uplands, about as big as Ireland, called the **High Veldt**. This region is specially adapted to sheep-grazing. (b) On the edges of the High Veldt plateau the land breaks off into lower hills and valleys, known as the **Banken Veldt** or terrace country. This is the "garden of the Transvaal," and is well suited for the raising of cattle, grain, and tobacco. (c) The north and north-east is occupied by the **Bush Veldt**. This district is lower, hotter, better watered and wooded than the rest of the country. It is specially suited for the cultivation of coffee and sugar.

(ii) "The lower parts lying toward the Indian Ocean and the Limpopo River are feverish, though drainage and cultivation may be expected to reduce the malaria and improve the conditions of health."—BRYCE's *Impressions of South Africa*.

(iii) "The winter cold is severe, and the fierce sun dries up the soil, and makes the grass sear and brown for the greater part of the year."—BRYCE.

**30. Resources and Towns.**—Like the Orange Free State, the Transvaal is primarily a pastoral country (though in many parts the herbage is less juicy and wholesome than in the Orange Free State,



and belongs to what the Boers call the "sour veldt"). **Wool** and **hides**, therefore, figure among the exports. Of agriculture there is yet very little. Maize is grown nearly everywhere, but other cereals can and will be grown on the Banken Veldt in increasing quantities to supply the wants of the mining population, for the great wealth of the Transvaal lies in its **minerals**. **Gold** ranks first, and in 1912 about 9 million ounces, valued at over £38,000,000, were produced. **Coal** is worked at Klerksdorp and Vereeniging in the south, at Boksburg near Johannesburg, and at Middelburg on the Pretoria-Delagoa Bay railway. In addition to gold and coal, there are deposits of **iron**, **silver**, **tin** (very rich in Swaziland), **zinc**, and **quicksilver** (both of which minerals are much used in gold-extraction processes). **Pretoria** is the capital, but **Johannesburg** is by far the largest town, and is the most important gold-centre in the world. Other gold-centres are **Lydenburg** and **Barberton**. Farming centres are Rustenburg, Nylstroom, and Marabastad on the Banken Veldt, and the old capital of Potchefstroom in the south-west. The manufactures are few, and the needs of the mining population are very large. The **imports**, therefore, consist chiefly of iron and metal goods, machinery, chemicals, timber, foods, and clothing. The **export** was practically all gold.

(i) **Johannesburg** (237) did not exist at all before 1885. Now it is the chief gold town of the world; it is the commercial capital of the country; it is connected by rail with every important seaport in South Africa. As Johannesburg can procure coal by branch railways from Klerksdorp, Vereeniging, and Boksburg, and rich iron-deposits are known to exist in the Transvaal, the town is destined to become a great manufacturing centre. Twenty-two miles by train west from Johannesburg lies **Krugersdorp**, where Dr. Jameson and his men surrendered to the Boers in 1896.

In 1885 there was hardly a sign of human habitation on the bleak and bare upland of the Witwatersrand. "The Boer ranchman sent out his native boys to follow the stock as they wandered hither and thither seeking scanty pasturage among the stones, and would have been glad to sell for a hundred pounds the land on which Johannesburg now stands." At the present day "one finds oneself suddenly in the midst of the stir and bustle of industrial life. Here are the tall chimneys of engine-houses; here huge heaps of refuse at the shafts of the mines mark the direction across the country of the great gold-reef."

(ii) **Pretoria** (48) lies in a warm sheltered plain embowered in blue-gum trees—a great contrast to strenuous Johannesburg. Its moist warm summer climate is especially adapted to the cultivation of flowers and fruit. Pretoria is the centre of the Banken Veldt, the richest agricultural region in the Transvaal, and is the junction for the Delagoa Bay railway. It is the administrative capital of the Union.

(iii) Besides Johannesburg and the Witwatersrand, the chief goldfields of the Transvaal are the **De Kaap** fields, of which **Barberton**, on a branch line from the Delagoa railway, is the centre; the **Lydenburg** fields, which lie in a good cattle and corn district; and the **Klerksdorp**, in the south-west, which also possess coal.

## THE MINOR COUNTRIES OF SOUTH AFRICA

BASUTOLAND, BECHUANALAND, ZULULAND,  
AND RHODESIA

1. **Basutoland**.—This little country—an elevated plateau, with a rugged surface—forms an irregular oval on the north-east of Cape Colony, behind the Drakensberg (or Quathlamba Mountains). It is almost exactly twice the size of Yorkshire. It is a well-watered country; with a fine climate; with the best grain-producing soil in South Africa; and with abundant grass for the immense herds of cattle of the Basutos, and for the hardy ponies which are famous over all South Africa. The buying and selling of this country takes place with the Cape Colony and the Orange Free State.

(i) **Basutoland** is a Crown Colony, and is governed by a Resident Commissioner. The capital is **Maséru**, with a population of 1300, of whom 200 are Europeans.

(ii) The population is about 400,000, of whom only 1400 are Europeans. The native population has increased since the country came under British rule. White men are not allowed to settle in the country without special permission.

(iii) The chief products are **wool, wheat, and mealies**. There are signs here and there of iron, copper, and coal.

(iv) The chief exports are **grain, cattle, and wool**. The imports consist of **blankets, ploughs, saddlery, etc.**

"The interior contains valleys and glens of singular beauty, some wild and rugged, some clothed with rich pasture. The voice of brooks (a sound rare in South Africa) rises from the hidden depths of the gorges, and here and there torrents plunging over the edge of a basaltic cliff into an abyss below, make waterfalls which are at all seasons beautiful, and, when swollen by the rains of January, majestic. Except wood, of which there is, unhappily, nothing more than a little scrubby bush in the sheltered hollows, nearly all the elements of beauty are present; and the contrast between the craggy summits and the soft rich pasture and corn-lands at their base gives rise to many admirable landscapes."—*BRYCE'S Impressions of South Africa.*

2. **Bechuanaland**.—The British Protectorate<sup>1</sup> of Bechuanaland lies between the Molopo River on the south and Lake Ngami on the north. German South-West Africa bounds its west side, and on the east lie the Transvaal and Rhodesia. The area is about 275,000 square miles; the population (of yellow Bechuana Kafirs) is 125,000. The Protectorate is an intensely dry and level land, lying between 3000 and 4000 feet above the sea. The rivers generally do not flow at all. Most of the area is taken up with the **Kalahari Desert**, which is a somewhat park-like country, affording good grazing in parts, and still sheltering many species of the big game of South Africa.

<sup>1</sup> *N.B.*—The Protectorate must be carefully distinguished from the old Crown Colony of **BECHUANALAND**, which now forms part of Cape Colony.

The chief European centres are Palapye, Gaberones, and Tati, all of which lie on the railway to Bulawayo.

(i) The Eastern districts afford good grazing, and there too the natives raise crops of "mealies" (maize). The Bechuana Kafirs export, through white traders, maize, cattle, and wood to the Kimberley market. The railway to Bulawayo in Rhodesia runs along the eastern border of the Protectorate, and the narrow strip of country, through which the railway runs, is under the control of the British South Africa Company.

(ii) The native territory of **Bamangwato** in the north-east, known as **Khama's** country, is the most prosperous region. **Khama** is an enlightened native chief, who will not allow a drop of intoxicating liquor to be drunk in his dominions.

"It is only in the wet seasons that the streamlets flow (if then), for Bechuanaland is intensely dry. I travelled four hundred miles through it without once crossing running water, though here and there in traversing the dry bed of a brook one was told that there was water underneath, deep in the sand."—**BRUCE**.

**3. Zululand.**—Zululand lies north of Natal, with which colony it is now incorporated. The country is a little larger than Wales, and has a population of about 165,000 natives, with the merest sprinkling of whites. Except near the low-lying swampy coast, the climate is temperate and healthy, and the country breeds considerable numbers of cattle. **Etshowé** is the chief station.

(i) The Zulus are the finest native race in South Africa—tall, strong, and with an eminently dignified bearing. Under their great chief **T'saka** they were once the terror of South Africa, and the fighting Zulu impis (or regiments) were only crushed finally in 1879 by the British.

(ii) North of Zululand lies another native territory—**Amatongaland**. This country is also under the jurisdiction of Natal.

**4. Rhodesia.**—This huge region (otherwise known as the **British South Africa Company's Territories**) has an area of 750,000 sq. miles. In other words, it exceeds the area of the whole of Central Europe between the Pyrenees, the North Sea, and the Russian frontier. It stretches from the Bechuanaland Protectorate in the south to Lake Tanganyika in the north. The river **Zambesi** divides it into two halves, known as **Northern** and **Southern Rhodesia**. The number of the native population is unknown: the white population is about 23,000, almost all of whom have settled in Southern Rhodesia.

(i) Rhodesia is bounded on the west by German South-West Africa, by Portuguese West Africa, and by Belgian Congo, and on the north by German East Africa. On the east it is shut off from access to the sea by Portuguese East Africa.

(ii) The administration of this huge territory is vested in the **British South Africa Company**, under the supervision of an Imperial Commissioner. The Company received its Charter in 1889. It was owing to the energy and foresight of that distinguished South African statesman, the late Cecil Rhodes (who has given his name to the country), that this important inland territory was secured to the British Empire.

**5. Northern Rhodesia.**—This region is also known as British Central Africa.<sup>1</sup> The country lies high, and it is well watered by streams which discharge into the Zambesi from the north. The climate, owing to the latitude, is of course hot, and Northern Rhodesia is not a white man's country.

(i) The territory is still undeveloped, but extensive mineral deposits, especially of copper, are known to exist in the north. The india-rubber tree covers large areas, and timber, cattle, and various sorts of agricultural produce (especially rice) abound.

(ii) The African Trans-Continental telegraph runs right through the country up to Lake Tanganyika, and a railway crosses through it into Belgian Congo.

**6. Southern Rhodesia.**—Southern Rhodesia is the plateau which constitutes the watershed between the Limpopo and the Zambesi. The central part of the region lies high—3000 to 5000 ft. above the sea. This region consists of undulating uplands, well grassed, well wooded, and with a rainfall sufficient for all agricultural purposes. The upland climate is temperate and healthy, and in it "Europeans can live and thrive and rear strong healthy children."<sup>2</sup> Round the Zambesi on the north and the Limpopo on the south the country lies low, and the climate is malarious and decidedly unhealthy. The two most important territories in Southern Rhodesia are **Mashonaland** in the centre and **Matabéléland** in the south-west.

(i) "Between the Zambesi and the high plateau lies one of the most inhospitable countries in Africa—rough and mountainous, infested with tsetse fly, and during half the year almost destitute of water."—SELOUS.

The TSETSE somewhat resembles the common house-fly: its bite is fatal to all domestic animals, except the donkey. Thus farming in a "fly" region is rendered impossible.

(ii) F. C. Selous, the famous African hunter, headed a pioneering expedition into Mashonaland in 1890. The Mashonas—a harmless and inoffensive native race—welcomed the coming of the white man. But the fierce Matabeles (an offshoot of the warlike Zulu nation) ultimately offered a strenuous resistance to the white intruders, and were only subdued after two sanguinary wars in 1893 and 1896.

<sup>1</sup> To be distinguished from the **BRITISH CENTRAL AFRICA PROTECTORATE**. (See p. 202.)

<sup>2</sup> Selous—*Travel in South-East Africa*.

**7. Resources and Towns.**—The resources of Southern Rhodesia are not yet developed. But the high breezy uplands offer splendid opportunities for cattle-raising and agriculture, and the mineral wealth of the country is past question. Gold and coal are the chief minerals—the latter specially important in view of the railways now under construction. The chief coal-deposits are at Wankie, 200 miles N.W. of Bulawayo, where the coal is said to be the best in South Africa. There are gold-fields in active operation at Gwanda, Bulawayo, Selukwe, and Hartley. The political capital is Salisbury in Mashonaland, but the largest town is **Bulawayo** in Matabeleland.

(i) **Salisbury** has a white population of 3400. It lies 4700 ft. above the sea. A railway joins it with the Portuguese port of Beira on the east coast, and with Bulawayo, 285 miles to the south-west. Up to 1893 **Bulawayo** was the capital of savagery—the head kraal of Lobengula, the ferocious Matabele chief. Now 5000 white men live there, and they have built theatres, and hospitals, and laid out parks and racecourses. From Bulawayo a branch railway runs south-east to the Gwanda gold-fields, and also north-west, through the Wankie coal-field, to the Zambesi at Victoria Falls. Thence it crosses Northern Rhodesia into Belgian Congo.

(ii) The fertile alluvial valleys on the eastern edge of the Rhodesian plateau (which gets more rain than other districts) produce rice, cotton, and sugar. The staple crops, however, are maize and Kafir corn (or millet).

Mashonaland abounds with evidences of an extinct civilisation. The most famous ruins are those of **ZIMBABWE** in the south-east—a great circular building made of squared and dressed stone, but built without mortar. It probably served both as a fortress and a temple. Near it have been found many ancient gold-mining and smelting implements. From various evidences it has been conjectured that Zimbabwe and other similar remains were the work of some Semitic tribe—probably Phœnicians; and that Mashonaland was the **OPHIS** of Scripture.

## CENTRAL AND EAST AFRICA

**1. Nyassaland.**—Nyassaland is also called the **British Central Africa Protectorate**. This territory lies along and round the southern and western shores of Lake Nyassa, and has an area of 42,000 sq. miles. The population is estimated at about a million natives, with a very small sprinkling of Europeans. The country is mountainous near the lake, but declines westwards in a series of vast plains, “a good deal cut up by the eroded valleys of streams, and by isolated peaks or ranges of hills.”<sup>1</sup> The most prosperous portion of the whole region, which is not yet properly explored, is

<sup>1</sup> Report on B.C.A. by Sir H. H. Johnston.



the south-east corner between Lake Nyassa and the Lower Shiré River. It contains the chief town, **Blantyre**. In the healthy Shiré highlands coffee and tea-planting promise well. Rice and cotton flourish on the lower ground, and on the uplands oats and barley.

(i) The Stevenson Road (220 miles long) joins the north end of Nyassa to Tanganyika; a weekly mail now travels over it. On Lake Nyassa plies a small fleet of British gunboats and trading steamers; and the Protectorate is connected by telegraph with the Cape via Salisbury, and with the Portuguese port of Chindé. Lake Nyassa drains into the Zambesi by the Shiré River, which is navigable from the Lake to the Murchison Cataracts. These rapids continue for 60 miles, but after them there is uninterrupted navigation to Chindé.

(ii) The port of the country is **Chindé**, on the only navigable mouth of the Zambesi. It exports such forest products as ivory and rubber, and the Shiré coffee. **Zomba** is the headquarters of B.C.A. Administration.

(iii) "Though one of the smaller African lakes, Shirwa (south-east of Nyassa) is probably larger than all the lakes of Great Britain put together. With the splendid environment of mountains on three of its sides, softened and distanced by perpetual summer haze, it reminds one somewhat of the Great Salt Lake simmering in a July sun. . . . A steel ship, London-built, steaming six knots ahead; and grass huts, nude natives, and a hippopotamus—the ideas refuse to assert themselves, and one lives in a perpetual state of bewilderment and interrogation. . . . To the head of Lake Nyassa in a little steam yacht is quite a sea-voyage. What with heavy seas, and head-winds, and stopping to wood, and lying-to at nights, it takes longer time than going from England to America. The lake is begirt with mountains, and storms are so incessant and so furious that Livingstone actually christened Nyassa the 'Lake of Storms.'"—**DRUMMOND**: *Tropical Africa*.

**2. British East Africa.**—British East Africa stretches from the confines of German East Africa for 400 miles along the coast to the river Juba. Inland it includes the head-waters of the Nile as far as **Fashoda**. The protected territory is roughly estimated to be about seven times as large as the United Kingdom. The population may number 2,500,000. The products are of the usual tropical kind, and include **copra**, **ivory**, **sesame seed**, and **rubber**; while cottons and iron and copper wire are imported for native trade. **Mombasa** (24) is the capital, and possesses the finest harbour on the east coast. From Mombasa the **Uganda railway** runs to Victoria Nyanza (584 miles), and a telegraph-line extends to the Ripon Falls on the Nile, whence it connects with the Egyptian system.

(i) Parts of the country are arid wastes, but other districts, notably Ukamba and Kikuyu, are exceedingly fertile, and suitable for cattle-breeding and crops of almost all



kinds; while the climate, owing to the elevation (6000 to 7000 ft. above sea-level) is healthy, with a mean temperature of 65°. The low-lying coastal zone, however, is very unhealthy.

(ii) British East Africa was first occupied in 1888 by the Imperial **British East Africa Company** (hence its old name of 'Ibea'); in 1895 it was placed under direct control of the Imperial Government.

**3. Uganda.**—This British protectorate lies between the Albert and Victoria Nyanzas. It includes the territories of Unyoro on the west and Usoga on the east. The capital is **Kampala** on Victoria Nyanza. The country is suited for the cultivation of coffee, rice, cotton, and tobacco, as well as for different grain crops, but so far the export trade consists of ivory. Uganda has railway communication from Victoria Nyanza with Mombasa on the coast, and telegraphic communication northwards with Egypt.

(i) Mr. Scott Elliott, an explorer in this region, thus describes it:—"The whole of Uganda and Usoga consists of an infinity of hills and ridges, 4000 ft. on an average above the sea; their flat valleys are usually occupied by swamp rivers often half a mile wide. These curve and twist about in an extraordinary fashion, and have numerous minor swamps connected with them. It is thus immediately obvious that railways are impossible,<sup>1</sup> and roads extremely difficult."

(ii) "As far as I have been able to judge, a very large amount of the country is suited to cattle. In Usoga cattle are both plentiful and cheap, and, as I can say from experience, stand travelling well, and yield for Africa a fair supply of milk. That English vegetables almost without exception thrive in Uganda proves that, at the lowest estimate the essentials of European food can be obtained. In my own opinion, however, it would not be going too far to say that the Victoria region may become one of the greatest food-producing centres in the world."

**4. Zanzibar Protectorate.**—Zanzibar and the adjacent island of Pemba are a British protectorate. Taken together they have a population of about 200,000, and their area is about that of Cheshire. A hot climate and a fertile soil favour the production of **cloves**, for which the islands are especially famous. When the clove crop fails, there are **copra** and **chillies** to fall back on.

(i) The town of **Zanzibar** (30) is the largest entrepôt on the coast, and it has a good harbour. To it led most of the old slave and ivory routes from the interior of the mainland. It sends to the mainland cotton-goods principally, and to Europe cloves, ivory, rubber, and gum-copal. The total trade amounts to about £2,000,000. The bulk of it is conducted with British India, and is in the hands of Hindu merchants, known as **banians**.

<sup>1</sup> The Uganda railway if continued from Victoria Nyanza will avoid these swamps by taking a north-easterly course.

(ii) Zanzibar is the headquarters of the Arab coasting dhow-traffic, and is also a station for the British India Navigation Company, the French Messageries Maritimes, and other lines. For these and other steamers Zanzibar imports large quantities of coal.

5. **British Somaliland.**—The British protectorate over part of Somaliland lies opposite Aden—about 68,000 square miles in extent ( $=\frac{1}{2}$  of the U.K.). Little is known of the country except that it is intensely hot and dry, and inhabited by a nomadic people who are by turns hunters, robbers, and cattle-herders.

(i) British Somaliland may be roughly divided into two areas: the **maritime plain** which is hot and feverish, and a **great plateau** extending towards the south into the desert region known as the **Haud**. On this elevated plateau the air is frequently crisp and exhilarating. But from January to April the great heat dries up the vegetation; and, as there is little or no permanent water in the Haud, the ground becomes parched and arid, and travelling almost an impossibility. Oases exist, however, from which the wandering Somalis procure scanty supplies of water. The Haud gets its rain in May and June; but the heaviest rains fall in the coast-plain from October to December. **Bohotle** is a well-known oasis in the maritime region.

(ii) From **Berbera** and **Zella** on the coast there is some export to Aden of cattle and hides, gums, and ostrich feathers. Salt is extensively bartered among the Somalis, and small blocks of it are sometimes used as currency.

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## WEST AFRICA.



1. **Introductory.**—The British dominions in West Africa comprise (a) three Crown colonies along the Guinea coast: **Gambia**, **Sierra Leone**, and the **Gold Coast**, each of them with a considerable protectorate behind it; and (b) the Protectorate of **Nigeria** (with Lagos), which is divided into Northern and Southern Nigeria. The three coastal colonies, together with the seaboard of Southern Nigeria, present the same physical characteristics:—a low swampy coast, backed by dense forests, through which the rivers wind sluggishly to the sea. The climate of all alike is very unhealthy for Europeans, and the staple product of all is **palm-oil** or **palm kernels**. The staple import is bad spirits, as poisonous to the natives as is the climate to Europeans. Northern Nigeria, on the other hand, largely consists of open savannahs—some 1000 ft. above sea-level, and the climate, though very hot, is much less enervating. Most of the river mouths

along the coast are spoiled as harbours, because the Guinea current chokes them with sandbanks.

(i) The products vary as the climates and character of the surface. In the steamy forest-region the **oil-palm** and the **rubber-creeper** and the **ebony** tree find their best development. The open rolling country of the interior produces splendid crops of **millet**, **sorghum**, **cotton**, and **indigo**, and affords excellent grazing for **cattle** and **horses**.

(ii) A corresponding difference is perceivable in the peoples. The coast native, deep black in colour (known by the general name of **Fantee**) is sunk in degraded superstition—a superstition as dismal as is his country. When he works at all he plants the **banana**—a plant which requires practically no tendance, but plenty of moist heat. But the people of the uplands, **Fulahs** and **Haussas**, are active and energetic—traders, agriculturists, stock-breeders, and warriors. They are Mohammedan by religion; whilst the coast-black has no religion at all, or else bows down before some hideous fetish of his own creation.

**2. The Crown Colonies.**—**Gambia**, **Sierra Leone**, and the **Gold Coast**, lie at intervals along the Guinea coast between the mouths of the Senegambia and Volta rivers. All have French territory at the back of them, and thus are shut off from trading with the interior.

(i) **Gambia** (about=half Rutland, but with a protected hinterland as big as Devonshire) has a population of 14,000. The River Gambia is navigable for ocean-going steamers, and on it stands the Capital, **Bathurst** (7). The chief export is **ground-nuts**, which go mostly to Marseilles, where “olive-oil” is extracted from them.

(ii) **Sierra Leone** (=twice Norfolk, with a protected area as big as Scotland) stretches along the coast for 180 miles. It has a total population estimated at 1,402,000. The colony is chiefly noted for its excellent harbour and bad climate. **Freetown** (35) is that harbour, and it is one of the few places in West Africa with a good landing and no surf. It is a naval coaling-station and a port of call for all West African lines, and from Freetown leads a short and easy route to the inland plateau. Palm-oil and kernels and kola nuts are the chief products and exports. At present all goods have to be carried down from the interior on men's heads along tortuous bush-paths, but a light railway is constructing from Freetown.

In the rainy season (June to October—fall in Freetown 165 inches) fires have to be kept burning all day to keep things dry, in spite of the heat.

(iii) The **Gold Coast Colony** (area 40,000 square miles=one-third that of the United Kingdom, with a protected hinterland about as large again) has a seaboard of 350 miles. Its hinterland includes the old native kingdom of **Ashanti**; and the population of the total territory may amount to 1,500,000. The dense fever-laden forest extends sixty miles north of **Kumasi**, the old Ashanti capital; then the country becomes an open grassy plain, relieved at intervals by patches of woodland. The exports of the Gold Coast are **palm-oil**, **rubber**, **ebony**, and **gold**. **Accra** (19) is the capital and largest town; other towns are **Elmina** and **Cape Coast Castle**, which commands the main route

to Kumasi. There is a railway from Sekondi on the coast to Tarkwa on an important gold-field, and from Tarkwa it reaches Kumasi (168 miles).

THE GUINEA COAST gave its name to our Guinea, in the days when it was much more famous for gold than it is now. But much is expected from the opening up of the Ashanti gold-fields.

**3. Southern Nigeria.**—This region was formerly called the Oil Rivers Protectorate. It consists of the endless network of rivers, creeks, and swamps which form the delta of the Niger.

(i) The chief centres of trade are Old Calabar (15), the capital, Bonny, Benin, and Akassa. The principal exports are palm-oil and kernels, rubber, ebony, and ivory.

(ii) Southern Nigeria includes the old native kingdom of Benin. Its savage and bloodthirsty monarch was dethroned in 1897.

"Imagine a country of 2500 square miles, one mass of forest, without one break except a small clearing here and there for a village and its compound. Imagine this forest stocked with trees some 200 feet high, with a dense foliage overhead and smaller trees to fill up the gaps. Imagine between all these trees an undergrowth of rubber-shrubs, palms and creepers, so thick that the eye could never penetrate more than twenty yards and often not even ten. Imagine the fact that you might easily walk for an hour without seeing the sun overhead, and only at times get a glimmer of a sunbeam across the path, and you have an elementary conception of the bush country of BENIN."

(iii) Lagos used to be a separate colony, but is now included in Southern Nigeria. The town of Lagos (33) lies on an islet of the same name and is the outlet for the palm-oil of the Yoruba country and the capital of Southern Nigeria. From near the town a railway runs to Zungeru and Kano in Northern Nigeria. It crosses the Niger at Jebba.

Gin is the chief feature of the West African import trade. It is the curse of the country. The character of the spirit and the harm it must do to the natives who drink it may be gathered from the following quotations of prices:—at Sierra Leone 4s. 6d. per dozen bottles; at Lagos —"superior gin, best quality"—2s. 6d. per dozen.

**4. Northern Nigeria.**—This protectorate was established in 1900. It includes most of the territories formerly administered by the Royal Niger Company. The region embraces, roughly, the whole of the eastern basin of the middle Niger, and the basin of the Benué. On the north a more or less straight line, drawn westwards from Barrua on Lake Chad to the Niger, separates it from French territory.

(i) Neither the area nor the population of this vast region has yet been ascertained. But the population of Hausa-speaking<sup>1</sup> peoples alone has been estimated at 30,000,000, and the Sultanate of Sokoto alone has an area of 310,000 square miles.

(ii) The two races of Northern Nigeria are Fulahs and Hausas. The Fulahs are the dominant class, and most of them actively prosecute the slave-trade, which is at present the curse of the country, and which will only be extinguished by the extension of British rule. The Hausa is a born trader and will go anywhere and do anything for the sake of trade. He also, under British discipline, makes a magnificent soldier.

<sup>1</sup> HAUSA is the lingua franca of Central and Western Soudan.

(iii) The climate of Northern Nigeria is far more suitable to the white man than any other part of West Africa.

**5. Resources and Towns.**—The surface of Northern Nigeria is good alike for pasture and cultivation, except near the rivers (where the forest is dense) and on the arid borders of the Sahara in the north. Crops of **rice, cotton, grain, and indigo** are cultivated. The cattle furnish an excellent leather, and the Haussas (the only manufacturing native race in Africa) carry on the manufacture of **saddlery, iron-smelting, indigo-dyed cotton-cloth, and even of ornamental glass-ware.** The towns are large, as is natural in a slave-raiding country, where the inhabitants are glad to find shelter behind walls from the sudden descents of wandering marauders. **Kano** (100) is the commercial capital and by far the most important town. Other important places are **Lokoja, Jebba, Katsena, Bida, and Zungeru, the political capital.**

(i) **Lokoja** and **Jebba** are two river-stations, and centres of river-borne trade. **Lokoja** occupies a commanding position at the Niger-Benue junction. **Jebba** lies some 220 miles further up the river.

(ii) **Kano** lies in almost the exact centre of the country towards the north. It is the most important town in Western Soudan. Here meet traders from all parts of Africa north of the Equator and west of the Nile valley. It is the **Manchester** of the Soudan, and has a really important cotton-manufacture. **Kano** clothes more than half the people of Central Soudan, and **Kano** cottons can be bought in such widely Sundered places as **Alexandria, Tripoli, Tunis, and Lagos.** It imports sugar, green tea, paper, needles, gunpowder, and beads, and exports cottons, ostrich feathers, ivory, leather, and **Kola** nuts.

(iii) **Katsena**, north of **Kano**, is the principal seat of the iron-smelting trade. **Bida** (100) lies about a hundred miles north of **Lokoja.** It is another manufacturing centre, and has industries of weaving, dyeing, iron-work, and glass-ware. **Egga** on the Niger is the port of **Bida.**

“The market of **Bida** is a sight not easily forgotten. There for one hour before sunset every kind of wares from manuscripts, ink, and paper to leathern goods, including shoes, horse-trappings, etc., are exhibited for sale before several thousand purchasers. In one corner is the slave-market, where about 200 slaves are exposed for sale every evening.”<sup>1</sup>

## ISLANDS CONNECTED WITH AFRICA

**1. Introductory.**—The islands which lie round the coast of Africa have little or no physical connection with the continent; and they have nearly as little commercial intercourse. Except in the Mediterranean, they are not parts of the mainland: and the largest

<sup>1</sup> This was written of **BIDA** before it came under the immediate jurisdiction of the Royal Niger Company in 1897. The slave-market has been since abolished.



island, Madagascar, is cut off from communication with the continent by the violent currents which sweep through the Mozambique Channel. Most of them now belong to European Powers; and all in the Atlantic are of volcanic origin.

- (i) To SPAIN : The **Canaries**; **Fernando Po**, and **Annabon** in the Gulf of Guinea.
- (ii) To PORTUGAL : The **Azores**; **Madeira**; and the **Cape Verdes**; **Prince's Isle**; and **St. Thomas**, in the Gulf of Guinea.
- (iii) To BRITAIN : **Ascension**; **St. Helena**; **Tristan d'Acunha**; **Mauritius**; **Rodriguez**; the **Seychelles**; the **Amirante Islands**; and **Socotra** (p. 164).
- (iv) To FRANCE : **Isle de Bourbon** (or Réunion); and **Madagascar**.

2. **Ascension ; St. Helena, etc.**—**Ascension** is a mass of volcanic rock, which rises out of the sea to the height of nearly 3000 ft. **Georgetown** is the only town; and it holds a British garrison. **St. Helena** lies 760 miles south-east of **Ascension**, and is, like it, a huge dark mass of volcanic rock rising abruptly out of the sea. The capital is **Jamestown**.

(i) When Napoleon Buonaparte was banished to **St. Helena**, **Ascension** was made a British port for men-of-war. It is still rated on the Books of the Admiralty as a war-ship.

(ii) Napoleon was banished to **St. Helena** in 1815, and died there, of vexation and cancer in the stomach, in 1821. His body was brought to Paris in 1840, and obtained from the French nation a reception of the most magnificent kind. During the war of 1899-1902 **St. Helena** was used as a place of confinement for Boer prisoners of war.

(iii) **Tristan d'Acunha** is the largest of a group of three islands, which lies 1500 miles to the west of the Cape, and the same distance south of **St. Helena**. A few people live on it. They raise potatoes, catch seals for making oil, and possess a few cattle and sheep. Both by choice and necessity they are all total abstainers.

**MAURITIUS.**—LATITUDE 20° 8' S. **Iquique, Port Denison.**

LONGITUDE 57° 20' E. Time 3.50 P.M.

3. **Mauritius, etc.**—The island of **Mauritius** lies in the Indian Ocean, 500 miles east of **Madagascar**. It is a fertile, healthy, and well-wooded island—not quite so large as **Berkshire** but, containing 368,000 people, with more than twice **Berkshire's** population. The capital and chief port is **Port Louis**. The chief exports are **sugar**, **rum**, **vanilla**, **aloe-fibre**, **cocoa-nut oil**, and **fine woods**; and the largest buyer is Great Britain. The chief British imports are **cotton-goods**, **coals**, **machinery**, **iron**, and **manure**. Almost every pound of food is imported—rice and grain from India, flour from Australia, and cattle from **Madagascar**.

**Rodriguez** and **Diego Garcia** are dependencies of the **Mauritius**. The **Seychelles** (east of Zanzibar) export **cocoa-nut oil**, **vanilla**, and **tortoise-shell**.



## Part III

# OUR POSSESSIONS IN THE TWO AMERICAS

THE DOMINION

NEWFOUNDLAND

THE BERMUDAS

BRITISH HONDURAS

THE WEST INDIES

BRITISH GUIANA

THE FALKLAND ISLANDS

## BRITISH AMERICA

**1. Introductory.**—The popular idea about British North America is that it is a wilderness of ice and snow, with a few wheat-bearing tracts of land here and there, and immense dreary forests on its northern boundaries. But this is a most imperfect and erroneous conception. The Dominion of Canada is a world, which contains all kinds of climates, all sorts of productions, every variety of mineral wealth, and almost limitless means of communication between its parts. It is a great social community that is advancing in wealth and in civilisation by leaps and bounds, and which has before it a future that even the strongest imagination can only very feebly picture. "Picture to yourselves," says Sir A. Galt, "a domain nearly as large as Europe, stretching from the Atlantic to the Pacific Ocean, with its southern extremity in the same latitude as the south of France, and its northern boundary along the shores of the Arctic Ocean. Possessing the finest forests in the world, widely-spread coal-fields, most extensive and productive fisheries, watered by the most remarkable natural distribution of lakes and rivers, enriched with all varieties of minerals, and now known to possess an enormous area of fertile prairie-lands destined to become the future granary of England,—this vast country reaches, as the crow flies, from ocean to ocean, 4000 miles, with an area south of the latitude of St. Petersburg of at least 2,000,000 of square miles capable of cultivation, and of which fully one-half produces every crop that is grown in Great Britain."

"From its geographical position, and its peculiar characteristics, **Manitoba** may be regarded as the key-stone of that mighty arch of sister provinces which spans the continent from the Atlantic to the Pacific. It was here that CANADA, emerging from her woods and forests, first gazed upon her rolling prairies and unexplored North-West, and learnt as by an unexpected revelation that her historical territories of the Canadas, her eastern sea-boards of New Brunswick, Labrador, and Nova Scotia, her Laurentian lakes and valleys, corn-lands and pastures, though themselves more extensive than half-a-dozen European kingdoms, were but the vestibules and ante-

chamber to that till then undreamt-of Dominion, whose illimitable dimensions alike confound the arithmetic of the surveyor and the verification of the explorer.

"It was hence that, counting her past achievements as but the preface and the prelude to her future exertions and expanding destinies, she took a fresh departure, received the afflatus of a more imperial inspiration, and felt herself no longer a mere settler along the banks of a single river, but the owner of half a continent; and, in the magnitude of her possession, in the wealth of her resources, in the sinews of her material might, the peer of any power on earth.

"The smallness of the maps to which people are accustomed has given rise to mis-conceptions and to inadequate ideas entertained by the best-educated persons of the extent of Her Majesty's North American possessions. Perhaps the best way of correcting such a universal misapprehension would be by a summary of the rivers which flow through them; for we know that, as a poor man cannot afford to live in a big house, so a small country cannot support a big river. Now, to an Englishman or a Frenchman, the Severn or the Thames, the Seine or the Rhone, would appear considerable streams; but, in the *Ottawa*, a mere affluent of the *St. Lawrence*—an affluent, moreover, which reaches the parent stream 600 miles from its mouth—we have a river nearly 550 miles long, and three or four times as big as any of them.

"But, even after having ascended the *St. Lawrence* itself to *Lake Ontario*—and pursued it across *Lake Huron*, the *Niagara*, the *St. Clair*, and *Lake Superior* to *THUNDER BAY*—a distance of 1500 miles—where are we? In the estimation of the person who has made the journey, at the end of all things; but, to us who know better, scarcely at the commencement of the great fluvial systems of the *DOMINION*. For, from that spot—that is, from *Thunder Bay*—we are able at once to ship our astonished traveller on to the *Kaministiquia*, a river of some hundred miles long. Thence, almost in a straight line, we launch him on to *Lake Shebandowan*, and *Rainy Lake and River*—a magnificent stream three hundred yards broad, and a couple of hundred miles long—down whose tranquil bosom he floats into the *Lake of the Woods*. Here he finds himself on a sheet of water, which, though diminutive as compared with the inland seas he has left behind him, will probably be found sufficiently extensive to render him fearfully sea-sick during his passage across it. For the last eighty miles of his voyage, however, he will be consoled by sailing through a succession of land-locked channels, the beauty of whose scenery, while it resembles, certainly excels the far-famed *Thousand Islands* of the *St. Lawrence*.

"From this lacustrine paradise of sylvan beauty, we are able at once to transfer our friend to the *Winnipeg*—a river whose existence in the very heart and centre of the continent, is in itself one of Nature's most delightful miracles,—so beautiful and varied are its rocky banks, its tufted islands,—so broad, so deep, so fervid, is the volume of its waters, the extent of their lake-like expansions, and the tremendous power of their rapids.

"At last let us suppose we have landed our traveller at the town of *WINNIPEG*—the half-way house of the continent, the capital of the *Prairie Province*, and I trust the future centre of the *Dominion*. Having had so much of water, having now reached the home of the buffalo, he naturally 'babbles of green fields' and careers in imagination over the primeval grasses of the prairie. Not at all. We take him down to the quay; and we ask him which he will ascend first, the *Red River* or the *Assiniboine*, two streams—the one 500 miles long, the other 480—which so happily mingle their waters within the limits of the city of *Winnipeg*.

"After having given him a preliminary canter on these respective rivers, we take him off to Lake Winnipeg—an inland sea 300 miles long, and upwards of 60 miles broad, during the navigation of which for many a weary hour he will find himself out of sight of land, and probably a good deal more indisposed than ever he was on the Lake of the Woods, or even on the Atlantic.

"At the north-west angle of Lake Winnipeg, he hits upon the mouth of the Saskatchewan, the gateway and highroad to the North-West, and the starting-point to another 1500 miles of navigable water, flowing nearly due east and west between its alluvial banks.

"Having now reached the foot of the Rocky Mountains, our 'Ancient Mariner,'—for by this time he will be quite entitled to such an appellation—knowing that water cannot run uphill, feels certain his aquatic experiences are concluded.

"He was never more mistaken. We immediately launch him upon the Athabasca and Mackenzie Rivers, and start him on a longer trip than he has yet undertaken, the navigation of the Mackenzie River alone exceeding 2500 miles. If he survives this last experience, we wind up his peregrinations by a concluding voyage of 1400 miles down the Frazer River, or, if he prefers it, the Thompson River, to Victoria, in Vancouver, whence, having previously provided him with a first-class return ticket for that purpose, he will probably prefer getting home *via* the Canadian Pacific.

"Now, in this enumeration, those who are acquainted with the country, are aware that for the sake of brevity I have omitted thousands of miles of other lakes and rivers which water various regions of the North-West—the Qu'Appelle River, Belly River, Lake Manitoba, the Winnipegosis, Shoal Lake, etc. etc., along which I might have dragged and finally exterminated our way-worn guest; but the sketch I have given is more than sufficient for my purpose; and when it is further remembered that most of these streams flow for their entire length through alluvial plains of the richest description, where year after year, wheat can be raised without manure, or any sensible diminution in its yield, and where the soil everywhere presents the appearance of a highly-cultivated suburban kitchen-garden in England, enough has been said to display the agricultural riches of the Territories I have referred to, and the capabilities they possess of affording happy and prosperous homes to millions of the human race. . . . In a world apart, secluded from all extraneous influences, nestling at the feet of her majestic mother, Canada dreams her dream, and forebodes her destiny—a dream of ever-broadening harvests, multiplying towns and villages, and expanding pastures; of constitutional self-government and a confederated empire; of page after page of honourable history added to her contribution to the annals of the Mother Country, and to the glories of the British race; of a perpetuation for all time upon this continent of that temperate and well-balanced system of government which combines in one mighty whole, as the eternal possession of all Englishmen, the brilliant history and traditions of the past with the freest and most untrammelled liberty of action in the future. . . ."—LORD DUFFERIN.

**2. The Coast Line.**—The Dominion of Canada possesses an enormously long coast-line upon three oceans and one sea. The shore-line on the Atlantic sea-board alone amounts to 10,000 miles. This sea-board abounds in deep indentations, which afford extensive and safe harbours and sheltered bays. The great inland sea called

**Hudson Bay** is second in size only to the Mediterranean, and receives rivers which drain a region of the enormous extent of 2,700,000 square miles. The **Gulf of St. Lawrence**, 80,000 square miles in extent—is the largest, and is probably destined to be the most important estuary in the world. The coast-line on the Pacific, which is nearly as long as that on the Atlantic, is deeply indented by long fiords, and is also guarded by a fringe of countless islands, which form a breakwater against the billows of the Pacific,—a breakwater behind which a ship can sail hundreds of miles in calm water. The two largest of these islands are **Vancouver** and **Queen Charlotte**. Thus the sea-board upon both oceans gives a very large number of openings for beautiful and spacious harbours, most of which have much deeper water than the harbours of the United Kingdom. . . . Indeed, the sea-way up the St. Lawrence and through the great lakes may be regarded as the true **North-West Passage**—a passage which leads not through seas of ice and the barrenness of eternal frost, but into some of the most fertile lands on the face of the globe. So great is the traffic along parts of this water-way that the tonnage which goes through the Sault-Sainte-Marie—from Lake Huron into Lake Superior—is said to be as large as the tonnage that passes through the Suez Canal.

(i) "The shores of the Dominion are not mere barren beaches such as border the sea, but hundreds of miles of green fir-clad banks along which vast and solemn pine forests grow, and where the lumberer's axe finds ready and profitable spoil."

GRESWELL.

(ii) The drawback is that the mouth of the St. Lawrence and several of the lakes are icebound for about four or five months in the year.

(iii) The chief openings on the Atlantic are the **Gulf of St. Lawrence** and the **Bay of Fundy**. Up the latter the tide rushes at the rate of six or seven miles an hour, and rises sometimes to the height of 70 ft. The sides of this Bay are very high; and it is shaped like a funnel.

(iv) The most important opening on the Pacific is the **Georgia Gulf**, between Vancouver Island and the mainland of British Columbia. This Gulf contains the excellent harbours of **Burrow Inlet**, **Esquimalt**, **Howe Sound**, etc. etc.

**3. Countries.**—British North America contains more than one-third of the whole continent, and comprises within itself the whole of the **Dominion of Canada**; and **Newfoundland**. The Dominion of Canada, again, which is nearly as large as the whole of Europe,

consists of the following provinces :—Ontario, Quebec, Nova Scotia, New Brunswick, Manitoba, British Columbia, Prince Edward Island, Alberta, Saskatchewan, and the North-West and Yukon Territories.

The word *Canada* is an Indian word meaning "group of huts."

(i) Newfoundland is the only part of British North America that has refused to join the Dominion.

(ii) The Confederation called the **Dominion** was formed in 1867.

(iii) Nova Scotia, New Brunswick, and Prince Edward Island are called "the Maritime Provinces."

(iv) The North-West Territories comprise the northern half of Canada along the shores of the Arctic Ocean. The territory of Yukon is in the extreme north-west.

(v) "To characterise in a few lines a country covering more than half the continent of North America, and reaching from the latitude of Constantinople to the North Pole; a country whose circuitous coast-line on the Atlantic measures 10,000 miles, and whose western shore upon the Pacific, studded with islands and indented by secure harbours and deep inlets, attains almost an equal length; a country where maize and peaches are staple crops, and where vegetation fades out upon the desolate and melancholy shores of the Arctic Ocean;—to characterise such a country by a few general phrases is evidently impossible. If we look at the eastern portion alone we see the greatest forest region in the world; if we consider the central portion, we are regarding the great prairie country; but if we cross the passes into the Pacific province, we enter upon that sea of mountains, compared with which the most mountainous country in Europe is of limited extent. And yet there are aspects in which, when British Columbia is excepted, this great country may be apprehended by a wide generalisation. It is a country of broad lakes and flowing waters, a country with an abundance of streams and a copious fall of summer rains. It is a land of grass and forest; a country containing by far the largest portion of fresh water upon the globe, where, 2000 miles from the ocean, the traveller may lose sight of land, and be prostrated by sea-sickness; a land containing the most extensive water-ways in the world, where thousands of miles of navigable rivers may conduct commerce into the remotest corner of the continent at its widest part."

#### 4. **Boundaries.**—British North America is bounded—

1. **N.** —By the **Arctic Ocean.**
2. **E.** —By the **Atlantic.**
3. **S.** —By the **United States.**
4. **W.**—By the **Pacific and Alaska.**

(i) The line of latitude which forms the boundary between Canada and the States is 49° North lat. This line strikes the Lake of the Woods; there the boundary is formed by a chain of lakes and rivers to Lake Superior. The line then goes right through the middle of four of the Five Great Lakes, passing north of Lake Michigan, which is entirely within the United States. Most of the boundary is a mathematical, not a natural, boundary.



(ii) The Dominion lies between 42° and 70° North lat.

(iii) The boundary line is 3000 miles from ocean to ocean ; 1400 miles being a water-line, by river, lake, and sea ; 1600 miles a land line.

5. **Size.**—The Dominion of Canada occupies an area of more than  $3\frac{1}{2}$  millions of square miles. It is therefore nearly as large as Europe, or equal to 30 United Kingdoms.

Europe contains 3,700,000 square miles ; Canada 3,653,946.

6. **Build (i).**—The high table-land between the Cordilleras and the Rocky Mountains ; a lower table-land on the eastern slope of the Rockies ; the long and lake-filled valley of the Mackenzie ; a vast breadth of low land round Hudson Bay ; the Laurentian highlands, which form the watershed between the Hudson Bay streams and those which flow into the St. Lawrence ; most of the valley of the St. Lawrence—these are the chief component parts which go to make up the vast Dominion of Canada.

(i) Another division of the surface of Canada is into : (a) The **Atlantic Slope** ; (b) the **Hudson Bay Slope** (the Watchish or Laurentian Mountain Range runs between the two) ; (c) the **Great Central Plain** ; (d) the **Rocky Mountain Plateau** ; (e) the **North-West Territories** ; and (f) the **Pacific Slope**.

(ii) The old Canada, which was divided into Upper and Lower (now Ontario and Quebec) consisted simply of part of the valley of the St. Lawrence. The St. Lawrence is indeed to Canada what the Nile is to Egypt. But the towns have now crept west of the river and along the lakes ; and the vast breadths of land west of Lake Superior are now filling rapidly up.

7. **Build (ii).**—The “Great North-West” is composed of three prairie steppes. (a) The Eastern prairie, which is the lowest, includes the Red River Valley and Lake Winnipeg, with the lands on its western shores. The average altitude on this plain is about 800 feet above the level of the sea, or 170 feet above the surface of Lake Superior. This prairie is nearly as large as the whole of England and Wales ; but one-fourth of it is taken up by the Lakes. Parts of it are covered with dense forests. The soil of the Red River Valley consists of a fine silty material, which makes up a rich loamy soil of almost inexhaustible fertility. (b) The second prairie steppe consists of a vast open country which goes by the name of the **GREAT PLAINS**. Its average elevation is about 1600 feet above the level of the sea. (c) The third steppe, which has an average elevation of from 2000 to 4000 feet above the sea-level, runs up to the very base

of the Rocky Mountains. Its area is larger than that of the United Kingdom ; and most of it is free from forest.

(i) The **Great Central Plain** is not level, but rises by three broad terraces or "prairie-steppes" to the foot-hills of the Rocky Mountains. These three prairie-steppes are 800 ft., 1600 ft., and 3200 ft. respectively above the level of the sea.

(ii) The **North-West Territories** consist of a vast region—full of countless lakes and forests—which drains into the Arctic Ocean and Hudson Bay.

8. **Islands.**—The islands belonging to the Dominion are—on the Atlantic coast : **Anticosti** ; **Cape Breton**, and **Prince Edward Island** (all in the Gulf of St. Lawrence) ; on the Pacific Coast : **Vancouver** and **Queen Charlotte Island**.

(i) **Anticosti** is attached to the Province of Quebec. It is a region of rocks and swamps, with a severe climate. There are good salmon, herring, and other fisheries.

(ii) **Cape Breton** is a highly indented island, with the beautiful **Bras d'Or** ("Golden Arm") among its numerous inlets.

(iii) **Prince Edward Island** is a fertile island, with a good climate. The capital is **Charlottetown**, with a good trade in shipbuilding, and large exportations of agricultural produce and oysters.

(iv) **Vancouver** is a fertile and well-wooded island 275 miles long. It is very rich in minerals. Its climate is somewhat like that of England, but a little colder and damper. The capital of the island is **Victoria**—a rising port.

(v) **Queen Charlotte Island** has extensive beds of the best anthracite coal.

The whole coast of **BRITISH COLUMBIA**, with the exception of two short stretches, is bordered by islands, which leave a channel wide and deep enough for the largest ocean steamers to sail along, in perfect safety from the winds and the surge of the Pacific. This channel may be compared with that on the west coast of Norway.

9. **Mountains, Rivers, and Lakes.**—The chief mountain-range is the **Rocky Mountains**, which are very high in British Columbia.—The chief rivers are the **St. Lawrence**, with its best-known tributary, the **Ottawa** ; the **Mackenzie** ; the **Fraser** ; the **Red River**, the **Saskatchewan**, and the **Assiniboine**. The great lakes are : **Superior**, **Huron**, **Erie**, **Ontario** ; **Winnipeg**, **Manitoba**, and **Winnipegosis** ; and all of them are in fact great inland seas, "studded with numerous sails and enlivened by swift steamers."

(i) The average height of the Rocky Mountains in British America is about 10,000 ft. ; but there are several low passes or "saddles" in the range—not above 4000 ft. above the sea-level, over one of which the Canadian Pacific Railway goes. **Mount Brown** (16,000 ft.) and **Mount Hooker** (15,700 ft.) are the highest summits. "In this superb mountain-range the loftiest peaks are clad with perpetual snow, thrown into bold relief by the dark green of the pines which clothe the lower slope. The spectacle

of this steep straight line—of these almost perpendicular walls of rock, capped by countless snowy peaks—is said by some to surpass the view of the Alps from the Cathedral of Milan or that of the Pyrenees from the ramparts of Toulouse.” . . . The Rocky Mountains are the mountain-backbone—the high wall cutting off one part of the continent from the other.

(ii) The **St. Lawrence** is the largest river in British America; that is, it has the finest volume of waters. “The St. Lawrence, with its system of canals, and the great lakes in the vicinity, have much helped in the development of the most thickly populated and the wealthiest of the provinces of Canada. These great water-ways provide for the transport of its produce far westward into the United States, and eastward into other Canadian provinces, as well as to sea, without being *ever unshipped*.”

The valley drained by the Ottawa is 80,000 square miles in area, for the most part covered with valuable timber, particularly red and white pine. It is abundantly intersected with large rivers, which afford the means of floating the timber of the lumberman to market, and contains a very considerable area of the best soil. The country, behind what has been called the red pine region, is generally beautiful and undulating, and sustains a growth of maple, beech, birch, and elm.

(iii) The **Fraser** (740 m.) is the chief river of British Columbia, and is noted for its enormous wealth in salmon. It drains a district nearly as large as Italy.

(iv) The **Red River** is 600 miles long, and flows into the south end of Lake Winnipeg. “Red River Settlement” was the former name of Manitoba. It rises in the United States, and flows through a nearly level prairie of the richest alluvial soil.

“The Red River, Saskatchewan, and Peace River country, south of the 60th parallel, is the great fertile prairie section in which nine-tenths of the land is fit for cultivation.

(v) The **Saskatchewan** is said to be 1900 miles long, and to drain a country more than twice as large as the Austrian Empire. Part of its course flows through a district which possesses a soil of black mould, deep and uniformly rich, with almost inexhaustible powers of growing wheat. The Saskatchewan falls into Lake Winnipeg; and the Nelson flows out of that lake; and sometimes both rivers are called by the same name.

(vi) The **Niagara** is the short river between the Lakes Erie and Ontario. The Niagara Falls have made it famous.

“Goat Island divides the waters of the Falls. On the Canadian side the rock is worn into the shape of a horse-shoe, which gives the name to this Fall, and has a width of 1900 feet, with a precipice of 160 feet. The American Fall, 660 feet wide, is straight in its line, and with much less water than the Horse Shoe Fall.

“The rumbling or thunder of the Falls is sometimes heard with a favourable wind for thirty or forty miles, and the trembling of the earth from the concussion of the water, for fifteen miles around; while the column of spray, with its prismatic colours, is visible sometimes at seventy miles.

“The chasm below is worn in the solid rock, and extends to the town of Niagara, at the mouth of the Niagara River on Lake Ontario, some miles below. This gradual retirement of the Falls towards Lake Erie commenced, as assumed by Sir Charles Lyell, from a geological examination of the strata, and a calculation of the time necessary to cause the wear, some 10,000 years since, and is still in progress, while the river is ever pouring its vast volume of waters into the abyss below.

“The quantity of water passing over the Falls is estimated at 701,250 tons per second, and the power at 4,500,000 horse-power.

(vii) It is its magnificent **LAKE SYSTEM** which is the peculiar characteristic of British North America. There are three main lake systems lying upon the surface of the country almost in a straight line from South-east to North-west. Under Group I.

we may place Lakes Ontario, Erie, Huron, and Superior; under Group II., Winnipeg, Winnipegosis, and Manitoba; under Group III., Lakes Reindeer, Athabasca, Great Slave, and Great Bear. The extent of country through which this chain of lakes stretches is from Latitude 40° N. to the Arctic circle. The minor lakes and lakelets of the Dominion may, in each system, be counted literally in thousands. For the sportsman, fisherman, and naturalist, they provide, in many cases, a most picturesque and productive recreation-ground. If we except, perhaps, the newly discovered lakes of Equatorial Africa, there are no lake systems anywhere approaching those of North America."—GRESWELL.

(viii) **Lake Winnipeg** has an area of 8900 square miles—that is, not so large as Erie (which has 9900). Its drainage area is twice as large as France.

(ix) **Lake Manitoba** is about a fourth the size of Winnipeg. For a circuit of 50 miles round the south end of the lake, the soil is of the richest description of prairie land.

(x) **Lake Winnipegosis** is a little larger than Lake Manitoba.

(xi)	LENGTH.	BREADTH.	AREA.	DEPTH.	ELEVATION ABOVE SEA.
Superior, . . . .	420 miles.	160 miles.	31,500 sq. m.	1000 ft.	600 ft.
Huron, . . . .	280 „	105 „	23,400 „	1000 „	574 „
Erie, . . . .	240 „	57 „	9900 „	200 „	565 „
Ontario, . . . .	180 „	55 „	7300 „	600 „	235 „

(a) **Lake Superior** is nearly as large as Ireland.

(b) **Lake Huron** is over twice the size of Belgium.

(c) **Lake Erie** is one half larger than Yorkshire.

(d) **Lake Ontario** is more than half the size of Belgium.

(a) "LAKE SUPERIOR may be considered as the inexhaustible spring whence the St. Lawrence has continued to derive its ample and pure waters, which have the azure tint of those of the ocean."

(b) "Nor are these lakes and rivers barren of products and food for man, as their cool waters swarm with the choicest fish, and are as valuable, acre for acre, as the richest agricultural land."

**10. The Climate.**—The Dominion of Canada contains all the climates of Europe, from that of Archangel to that of the south of France—with this difference, that the summers are hotter, the winters much colder, and all seasons drier than in the European continent. It is easiest to form a practical and applicable idea of the different climates from observing the different kinds of vegetation; and, from this point of view, it may be said that Canada possesses nine well-marked varieties of climate.

(a) "Wherever the soil permits, it can produce potatoes and turnips, the hardier garden vegetables, barley, oats, and hay; also, in great abundance, strawberries, raspberries, and currants; so that wherever the fisheries or the mineral resources of the district render it desirable that men should dwell, they can raise sufficient fresh vegetable food to maintain themselves in health."

(b) "The basin of the St. Lawrence is *par excellence* the land of forests." "The tints of the autumnal woods have always excited the astonishment and enthusiasm of travellers. Even in cloudy days the hue of the foliage is at times of so intense a yellow that

the light thrown from the trees creates the impression of bright sunshine. Each leaf presents a point of sparkling gold. But the colours of the leafy landscape change and intermingle from day to day, until pink, vermilion, purple, deep indigo, and brown, present a combination of beauty that must be seen to be realised, for no artist has yet been able to represent, nor can the imagination picture to itself the gorgeous spectacle."

- (c) "The chief grazing region, the chief meadows and pastures in North America, the home of the herds, flocks, and the dairy, must be in the Dominion of Canada, embracing as it does the zones of summer rains, and lying in latitudes and positions similar to the western and central parts of Europe.

Taking as our guide the temperatures and rainfall, the existence of native grasses, and the analogy of Europe, we are justified in the inference that the cultivable grasses in the Dominion would extend over an area of more than 2,000,000 square miles, or more than 1,200,000,000 acres."

(i) "The climate is very healthy everywhere; but it differs in many respects from that of England. The summers in Ontario, the North-West, and British Columbia, indeed in all parts of Canada, are much finer and hotter than those in England. Bright, cloudless days succeed one another for weeks together; and but little rain falls. . . . The grapes, melons, and peaches that ripen in the open air in many parts of Quebec, Ontario, and British Columbia are evidence of the warmth of the summer months. . . . The winters, on the other hand, are far colder than those in England. Winter lasts from November till the end of March; during these months, the weather is very severe, and the thermometer sometimes registers 20° and 30° below zero. . . . But the peculiar dryness of the atmosphere makes the intensity of the cold far less keenly felt than it would be in our damper climate."

(ii) The **North Shore** of the St. Lawrence produces barley and oats, strawberries and currants; but no wheat. The **South Shore** grows wheat. Wheat ripens best at a temperature of from 60 to 65 degrees.

(iii) The **Ottawa Basin** and the **Upper St. Lawrence Valley** grow Indian corn or maize. This cereal requires a mean temperature of 67°, for July, which is reached throughout this district. Here, too, we find the grape-vine, the melon, the tomato, and the apple. This is the most populous and most wealthy part of the whole Dominion.

(iv) **South-West Ontario** has the best climate in Canada. Peaches and grapes ripen as standards; and the finest kinds of pears and apples are grown.

(v) The **North Shore of Lake Superior** is cold, and grows only barley and oats.

(vi) The **Western Prairie** produces excellent wheat.

(vii) **Nova Scotia** has a damp and insular climate, grows little wheat or oats; and thus bread-stuffs have to be imported. But, round the Bay of Fundy, into which, as into a funnel, the warm winds from the mild waters of the Gulf Stream blow, the best plums, pears, and apples come to perfection.

(viii) The **Peace River** district (in Athabasca) and the country stretching to the Saskatchewan (in Alberta) is the hottest in Canada. The heaviest and hardest wheat is grown here.

(ix) **British Columbia** has a varied climate. While the inland mountain valleys have only 15 in. of rain per annum, Victoria has 40, and parts of the north coast 100. Thus in the interior irrigation is often employed, while along portions of the rain-soaked coast no cereals can be grown.

- (a) The severity of the Canadian frost kills off the orange, the olive, and the fig.—We must also remember that, even in the best parts of Canada, the winter lasts at least four months. All



agricultural labour is at a standstill; and skating, sleighing, dancing, and amusements take its place. The ice on the St. Lawrence does not disappear before the middle of May. But the winters are glorious: the air is dry, the sky a clear blue, the cold bracing and strengthening; and everybody is in high spirits.

- (b) "A line touching the most southern part of Canada on Lake Erie, and carried directly east, would go through Spain and Portugal, the Mediterranean Sea, Italy at the point of Rome, the Adriatic, Turkey, and the southern part of the Black Sea."

"Canada in its wide Dominion embraces the climates, and to some extent the winter colds of the whole of Europe, from the extreme north to the south of France."

- (c) "The orange, the olive, the fig-tree—all cultivated in districts of Europe where the mean temperature is less than that of Canada—perish under the influence of Canadian frosts."
- (d) "Snow generally covers the ground from November to April, but it packs everywhere underfoot, and makes, even in the roughest and newest parts of the country, winter roads, over which heavy burdens can be drawn on sleighs with the greatest ease."
- (e) "The spring and the autumn pass rapidly in Canada; the new life of plants comes out in the forests in one great burst; and almost as suddenly, after a short but delicious autumn, begins the winter-sleep of the plants and trees."—RECLUS.

**11. Productions.**—**Timber** and **Cereals** are the chief products of Canada.—The mineral wealth of Canada is enormous; but it has been as yet very little worked. On the coasts, the fisheries of **cod** and **salmon** are of very great value.—In the North-West Territory, large quantities of **furs** are secured and shipped to Great Britain.

(i) The forests of the Dominion form one of the chief resources of the country. The sugar maple, white and red oaks, grey elm, white pine and red pine, black ash, white cedar, white birch, poplar, white spruce and black spruce are a few among the sixty different kinds of trees that make up Canadian forests. Gigantic oaks and elms grow to a thickness of 22 ft. round. In spite of the perpetual cutting down, the supply of timber can never give out; as on Arbor Day, every schoolboy and school-girl plants a tree in some selected spot in the Dominion.

"The Canadian forests are made up of some sixty kinds of trees, with numerous shrubs."

(ii) The great central prairies of the Dominion contain the best wheat area in the world; and this wheat area is nearly three times as large as England. In some parts of this area a crop of 60 bushels to the acre has been obtained.

(iii) The amount of corn-growing land is practically inexhaustible. It is calculated by Professor Hind that, in the region drained by Lake Winnipeg, there are about 55,000,000 acres fit for cereals. "The country produces a greater variety of grains, grasses, vegetables, and fruits, than is usually grown in Great Britain and Ireland."

- (a) "The northern limit of wheat is about 58° north latitude. . . . Hence the immense areas in the north-west in Canada favourable for wheat. South of the northern limits, where wheat has been found maturing, east of the Rocky Mountains, and west of Ontario, there are some 950,000 to 1,000,000 square miles in these north-west territories of Canada. . . . It lies, too, in the valleys of the great rivers of the northern half of the continent—the Saskatchewan, Assiniboine, Red, Winnipeg, Peace, Athabasca, and Mackenzie—with probably a larger percentage of tillable soil than any equal area in the Old World."

- (b) "Settlers, eager to press on to even more favoured regions, are now dotting the trail across the prairie with their farms in every direction. Villages are springing up many hundreds of miles west of Winnipeg; churches are being built; mills to grind the future crop are having their steam-engines wearily dragged across the plains."

(iv) Gold, coal, iron, lead, copper, nickel and other metals and minerals are largely distributed all over the country. The provinces of British Columbia and Nova Scotia



are the richest in minerals. On the shores of Lake Superior are found rich deposits of ore of silver, copper, and iron. Coal is the largest mineral product of the Dominion.

12. **Animals.**—The wild beasts of the North American continent have fled before the face of man and the erection of towns and villages. But Canada is so vast a country that it affords shelter and nourishment to game of many kinds, large as well as small. In the immense forests of Nova Scotia, Quebec, and New Brunswick **moose** are abundant; and, in the wilder parts of Ontario, **deer** are hunted. British Columbia is famous for its **deer**, **moose**, **bears**, and other large game. The **bison** has disappeared from the North-West; but the sportsman can still find **duck**, **prairie chicken**, etc., in large numbers. Nova Scotia abounds in **woodcock**. **Grouse**, **duck**, and **snipe** may be met with everywhere. The rivers abound with many kinds of excellent fish; but the best **salmon** streams are in Nova Scotia, New Brunswick, and, far above all, in British Columbia.

(i) "All game is free; but there are close seasons."

(ii) "Canada has been esteemed from its earliest discovery for its valuable fur-bearing animals, and has been the trapping and hunting-ground for two centuries of the Hudson Bay Company and other organisations."

(iii) "The sportsman can have any form of sport he likes, from bagging squirrels and partridges and pigeons in the old settlements to tussling with grizzly bears in the wild cañons of the Rocky Mountains."

(iv) "Canada," says Professor Elwyn, "possesses thousands of miles of sea-coast swarming with fishes. Cod, mackerel, lobsters, and herrings are the most valuable fish. The prolific fishing-grounds of Hudson Bay and of the Arctic and Pacific coasts have hardly as yet been tested. The inland fisheries are also of very great value. All the lakes in Canadian territory—large and small—as well as innumerable rivers, abound in salmon. Canada is indeed the paradise of the angler."

(v) The bear, the beaver, the fox, the sable, the seal, and the ermine are the chief animals that are hunted for their furs.

13. **Industries.**—**Agriculture**, **forestry**, **fishing**, and **mining** are by far the most important of Canadian industries. Manufactures are, however, of importance. All the manufactures of older countries are at work; and they will grow and develop with the growing population and wealth of the country. Canada possesses, in a higher degree than any other country on the face of the globe, enormous supplies of motive power. This motive power has two sources. One, which has not been yet utilised, is to be found in the rise and fall of the tidal wave;

and the Bay of Fundy, in which the tide sometimes rises to the height of 70 feet, is the region which possesses the largest amount of this motive power. The other source of power is to be found in the waterfalls and rapids which abound in the country. These falls have been already set to work in many parts of the Dominion to saw timber and to produce the electric light.

(i) The Falls of Niagara are computed to contain a force equal to 4,500,000 horse-power.

(ii) The Canadian saw-mills are the largest and the most skilfully constructed in the world. By a clever automatic process, the water is made to seize a log, lift it out, place it under the saws, and cut it into inch boards in a few minutes.

**14. Commerce.**—The commerce of the Dominion is a quantity that is steadily growing. The countries with which she deals most largely are Great Britain and the United States. The United States sends her most imports. Great Britain takes from her the largest quantity of exports. The chief imports are **wool** and **woollens**; manufactured **iron** and **steel**; **coal** and **coke**; **bread-stuffs**; **cotton** and **cotton cloth**; **tea** and **coffee**, **sugar**; and other colonial wares. By far the most important export is **timber**. After it come **gold** (fluctuating in value, however), **cheese**, **wheat**, **bacon**, **cattle**, and **fish**.

(i) Canada is beginning to utilise her vast stores of material and power in her own home manufactures, but she is yet far from being self-sufficing in this respect. Thus in 1913, while she exported about £8·6 m. worth of manufactures, she imported £69·7 m. worth. The bulk of these manufactured imports comes, as is natural by reason of geographical proximity, from the U.S.A.

(ii) About 60 per cent. of the imports come from the U.S.A. and about 25 per cent. from the United Kingdom. On the other hand, about 50 per cent. of the exports go to the United Kingdom, and about 40 per cent. to the U.S.A.

(iii) The exports in 1913 amounted to about £78,600,000; the imports to about £138,000,000.

(iv) "Already Canada is among the first of the great carriers of the world; her ships are found in every sea, from every frequented seaport they bear the produce of other lands to market. Her trade is no longer with England and the United States alone, but extends to the East, to Australia, the West Indies, and South America."

**15. Ports.**—The principal ports in the eastern part of the Dominion are **Montreal** and **Quebec** (in the province of Quebec); **Halifax** (in Nova Scotia); and **St. John** (in New Brunswick). On the Pacific coast the chief ports are **Vancouver** and **Victoria**.

(i) The harbours of **Quebec** and **Montreal** are closed by ice in winter.

(ii) **Halifax** and **St. John** have splendid harbours open all the year round. **Halifax** is the chief naval station of British North America, and is garrisoned by Canadian troops.

(iii) "During the summer the main route to Canada is by Quebec and Montreal, 180 miles farther up the river."

(iv) "Railways start from Halifax and Quebec to all parts of the Dominion."

**16. Distances.**—The splendid lines of steamers and the magnificent systems of railways which have placed Canada in communication with all parts of the world have decreased the difficulty and expense of travelling, and have also diminished the time required. The following is a **TABLE OF DISTANCES AND TIMES** :—

ROUTES.		DISTANCES.	TIMES.
Liverpool	to Quebec	2661 miles	8 days
"	" Halifax	2480 "	7½ "
Quebec	" Vancouver	3047 "	4 "
Vancouver	" Hong-Kong	5936 "	
"	" Auckland	6780 "	
"	" Sydney	7434 "	
Liverpool	" Hong-Kong (by Quebec)	11,601 "	
"	" Auckland "	12,689 "	
"	" Sydney "	13,189 "	

**17. Population and Populousness.**—The population of the Dominion amounts at present to 7,206,643 souls. This is only about 2 persons to the square mile. Four-fifths of the population have been born in the Dominion. The most densely-peopled part of the country is the small water-edged triangular peninsula between Lake Huron and Georgian Bay on the west, and Lakes Erie and Ontario on the east. This small peninsula contains about two-sevenths of the whole population of Canada ; and yet it is less densely peopled than the agricultural county of Lincolnshire. The next most thickly peopled province is Prince Edward Island, which has 51 persons to the square mile ; the most thinly peopled is the Territories, which have about one person to every 70 square miles.

(i) About four-fifths of the inhabitants live in the valley of St. Lawrence. The most populous province is Ontario.<sup>1</sup> "The great mining centres of Australia and South Africa localise trade and cause a divergence of population towards themselves. In Canada the occupations of agriculture, of lumbering, and of fishing, which are the chief ones, spread the people abroad over many country towns and villages."—GRESWELL.

<sup>1</sup> That is in the Lake Peninsula mentioned above. The density for all Ontario, which includes huge undeveloped and almost uninhabited districts north of Lake Superior, is only about 10 persons to the square mile.

(ii) "It is calculated that British North America could easily support a population of 140 millions at the rate of 40 to the square mile."—GRESWELL.

(iii) Most of the inhabitants are English-speaking descendants of Englishmen and Scotchmen. But, in the Province of Quebec, most of the people are of French descent—all of whom speak French. They are descended from the French who settled in Canada before it was seized by the English in 1763. Nearly 1,300,000 persons are of French origin; and they are increasing rapidly.

(iv) "About one-half are of English, Scotch, and Irish extraction; one-fourth are of direct French descent; Germany is well represented; and every nation in Europe has contributed its quota to swell the population. Of Indians there is an estimated population of 100,000."

(v) "Canada is pre-eminently a country of yeoman farmers. The land is held in possession and tilled by the settler on his own account; and, with every addition to the numbers of its industrious population, fresh acres are recovered from the wilderness and added to the productive resources and the wealth of the Dominion."

(vi) "In the Far West of the Dominion there are scores of millions of acres surveyed for settlement, while railway development is steadily proceeding. . . . The best land is said to be found upon the valley of the North Saskatchewan, opposite to the Giant Peaks of the Rocky Mountains which form the frontier between British Columbia and Alberta."

(vii) "Of all the lands under a temperate climate to which British emigrants can go, Canada is by far the most accessible. . . . The Dominion tempts the immigrant by free grants of land; and in the North-West, no clearing is required, so that the intending immigrant has, as compared with those who go to other parts of the globe, the cheapest journey and the least expenditure to face when he arrives at his journey's end."

**18. Communications.**—In no country or continent on the face of the globe has Nature provided so vast a network of water-communication. It is hardly an exaggeration to say that, by means of its deep rivers and vast lakes, it would be possible to go almost entirely by water from the mouth of the St. Lawrence to the mouth of the Mackenzie, right through the heart of the continent.—Canada has also more than 26,000 miles of railway. The longest is the **Canadian Pacific**, which unites the two oceans, and has shortened the distance from London to Japan and the East by 1188 miles.

(i) On all the larger lakes there are lines of steamers. On most of them it is quite easy to get out of sight of land, and to be as sick as on the billows of the Atlantic. Steamers of 4500 tons burden can enter the harbour of Montreal by one of the grandest canals in the world. A canal with locks has been built to avoid the Falls of Niagara; and one can travel by steamer from the Strait of Belle Isle, at the mouth of the St. Lawrence, through Lakes Ontario, Erie, St. Clair, and Huron to Duluth at the head of Lake Superior—a distance of 2384 miles

(ii) "From Belle Isle to the head of Lake Superior, a distance of 2384 miles, there are only 72 miles of canal."—GRESWELL.

(iii) The Canadian Pacific Railway was finished in 1885. The length of the main line from Montreal to Vancouver is 2908 miles. The **Intercolonial Railway** from Halifax to Montreal (834 miles) may be regarded as the eastward extension of the Canadian Pacific Railway. Thus Halifax may be said to be the Atlantic terminus of the Canadian Pacific, though, strictly speaking, it starts from Montreal. Halifax is an open port when Montreal is closed with ice.

**19. Government.**—The Dominion Parliament meets at Ottawa, the federal capital of the country. Each province has a local parliament of its own. The Governor-General of the Dominion is the viceroy or representative of the King.—The education of the country is specially cared for, and notably in the Province of Ontario. Each Province has a Minister of Education.

All the provinces of the Dominion, with the exception of British Columbia, have one or more Universities. The University of Toronto is the most famous. More than £5,000,000 a year is spent on education; and, when it is considered that the whole population is little more than that of Scotland, this is an enormous sum. (Scotland, with all the advantages of an old country, does not spend half this.)

**20. Divisions.**—The following is a list of the Canadian provinces and territories, with their chief towns:—

- |  |   |
|--|---|
| 1. Quebec—Quebec, Montreal, Hull.        | 8. Alberta—Edmonton, Calgary, Medicine Hat, Lethbridge. |
| 2. Ontario—Toronto, Ottawa, Hamilton.    | 9. Saskatchewan — Regina, Saskatoon, Moose Jaw.         |
| 3. New Brunswick—Fredericton, St. John.  | 10. Yukon Territory—Dawson.                             |
| 4. Nova Scotia—Halifax, Sydney.          | 11. North-West Territories (administered from Ottawa).  |
| 5. Prince Edward Island—Charlottetown.   |   |
| 6. British Columbia—Victoria, Vancouver. |   |
| 7. Manitoba—Winnipeg, Brandon.           |   |

*N.B.*—The North-West Territories in 1912 had nearly 700,000 square miles of their extent cut off and transferred to the provinces of Quebec, Ontario and Manitoba. The Territories are administered by the Dominion Government.

## QUEBEC.

QUEBEC.—LATITUDE 46° 48' N. St. John's (Newfoundland),

Victoria (British Columbia) about.

LONGITUDE 71° 17' W. Time 7.18 A.M.

**21. Quebec** (formerly called Lower Canada), a province which is nearly 12 times as large as England, consists of that part of the St. Lawrence Valley which lies east of the Ottawa, nearly the whole of the boulder-strewn plateau of Labrador, and a slip of land on the south side of the St. Lawrence river. This southern strip

is level, fertile, and well cultivated. More than two-thirds of the inhabitants are of French origin. Indeed Quebec may be described as a French colony, while Ontario is a distinctly British colony.

(i) The city of **Quebec** is the seat of a very large timber industry. Farming is the principal industry of the Province. "Fruits ripen very rapidly during the warm summer months." **Montreal** is the largest city.

(ii) "Forests cover a large part of the Province, and provide **Quebec** with a valuable timber trade. . . . In the **Ottawa** region, pine is the most abundant timber; in other parts, spruce, cedar, hemlock, and birch."

## ONTARIO.

**TORONTO**.—LATITUDE 43° 38' N.

**Toulouse, Bukharest, Tashkent.**

LONGITUDE 79° 30' W. Time 6.42 A.M.

22. **Ontario** (formerly called Upper Canada) lies between **Quebec** and **Manitoba**, and has four of the Five Great Lakes on its southern border. It is eight times as large as **England**. It is by far the most important province—the richest in population, in intelligence, in manufactures, and in general wealth. It contains 2,523,208 people. **Ontario** was enlarged in 1912 by a huge territory, christened **Patricia**, stretching up to **Hudson Bay**. The capital, **Toronto**, is the second largest town in the Dominion. It stands on the north shore of **Lake Ontario**, in a magnificent position for trade. **Kingston** stands at the outlet of the **St. Lawrence** from **Lake Ontario**. Below **Kingston** the river is studded with about 2000 islands, which, however, are generally called "The Thousand Islands." At **Kingston** starts the **Rideau Canal**, which runs to **Ottawa**, and connects **Lake Ontario** and the **River Ottawa**.

"The **Niagara** district of Western **Ontario** and the shores of **Lake Erie** are celebrated for their fruits. The richest of our native grapes, full in flesh and rich in flavour and colour, the peach, the nectarine, the pear, the plum, the apple, the cherry, the melon, and the tomato are to be found in abundance along its shores."

(i) The river **Ottawa** flows through one of the most picturesque regions in the Dominion, and on both sides of it stretch away for hundreds of miles the noblest forests in the world. It is in these forests that the lumberer finds and lays low his most magnificent spoils. Travelling down the **Ottawa** is a "succession of charming surprises." At one time the river is a vast lake across which you can hardly see; at another a long reach studded with wooded islands; at another a narrow rocky pass, through which the dark waters of the river rush in a tempestuous torrent, against which no steamship could hold its way; at another part the traveller sees impetuous rapids rushing down in masses of broken water to magnificent falls. From the deck



of the steamer you may see at one time a wide landscape of endless hill and dale ; at another you are shut up within a narrow rock gorge which has no visible outlet.

(ii) "The country from Hamilton to Lake Huron on the west and Lake Erie on the south is the best settled, the best farmed, and the most attractive part of Canada. Besides grain and the commoner kinds of fruit and vegetables, melons, grapes, peaches and tomatoes grow plentifully in the open air near Niagara Falls, around Chatham, and in most other parts. The United States and Ontario make excellent markets ; and there is no part which is far removed from a railway."

(iii) "Farming is the main industry of Ontario, and is carried on more scientifically than in other parts of Canada. England and the United States are excellent markets ; and communication by road, rail, and water, are good."

(iv) Nickel, iron, salt, copper, gold, and petroleum are found in different parts of the Province.

(v) The fisheries are nearly as large as those of Quebec.

(vi) "The manufactures of Ontario are the largest in Canada."

"This extensive province is distinguished from the last as that in which the profitable cultivation of Indian corn becomes possible. In every part of this province, too, the hardier kinds of the grape vine, which is nearly coincident in range with Indian corn, ripen their delicious fruit."

## NEW BRUNSWICK

FREDERICTON.—LATITUDE 45° 56' N.

Bordeaux, Venice, Halifax (N.S.).

LONGITUDE 66° 45' W. Time 7.37 A.M.

**23. New Brunswick** (which is nearly as large as Scotland) lies between the Gulf of St. Lawrence and the State of Maine ; while it has Quebec on the north, and Nova Scotia on the south. Much of the wealth of the province consists in timber and minerals ; and fishing and shipbuilding are important industries. The people are chiefly of British descent ; but there are many persons of French origin, for New Brunswick formed part of the French colony of **Acadia**, which has been so beautifully described by Longfellow in his *Evangeline*. **Fredericton** is the political, St. John the commercial capital. St. John rivals Halifax in its fisheries and in its West India trade.

(i) "**New Brunswick** has water everywhere." Hence most of the mills, saw-mills, and factories are driven by water-power.

(ii) "The lumber industry is much the largest."

(iii) Most of this province still remains to be cultivated. "About one-sixteenth only of the Province is cleared land."

(iv) "The greater part of the Province is still covered with pine, spruce, hemlock, tamarac, cedar, maple, and other timber. The saw-mills and lumber trade employ many thousand hands."

(v) "Large quantities of cod, herring, smelt, lobster, etc., are caught throughout the year in the Bay of Fundy, and on the east coast; while the rivers are full of salmon, trout, and other fish."

"The healthiness of the climate is proved conclusively by the vital statistics, and it is said that nowhere do men and women grow to finer proportions than in New Brunswick, nowhere does the human frame attain to greater perfection and vigour, or is human life extended to a longer term, and this notwithstanding that the thermometer has so great a range as from 11 below zero to 82°, with a mean temperature of 40°."

## NOVA SCOTIA

HALIFAX.—LATITUDE 44° 39' N. *Bordeaux*,

*Venice*, *Fredericton* (New Brunswick).

LONGITUDE 63° 40' W. Time 7.48 A.M.

24. **Nova Scotia** is a province, slightly undulated and well watered, which consists of a peninsula and an island—the latter being called **Cape Breton**. The two (which together =  $\frac{2}{3}$ ds of Scotland) are separated by the Gut of Canso. But the population is not quite half a million. The province is rich in timber, and also in coal, iron, and gold. "About 5,000,000 acres are fit for tillage." The chief industries are lumbering, mining, and fishing. **Halifax**, with a magnificent harbour which is never closed by ice, is the capital. The Intercolonial Railway runs from Halifax to Montreal (834 miles). **Sydney** in Cape Breton has some trade in coal.

(i) **The Valley of Annapolis**, in Nova Scotia, is a very fertile district. "Few parts of Canada can show such rich orchards, such prosperous farm-houses, or such pretty villages as may be seen in the Annapolis Valley between Digby and Windsor. Excellent apples, pears, plums, cherries, and quinces are raised; and even peaches and grapes are grown in the open air. Apples are, however, the principal and best fruit crop. Every part of the valley is suitable for fruit-farming."

"No finer scenery can be found in America than in the hills and dales, the quiet glassy lakes, and the land-locked inlets of this beautiful Province."

(ii) **Nova Scotia** is also well off for coal. About 5,000,000 tons are raised every year. The chief mines are at **Sydney**, near Cape Breton. The coalfields are 250 square miles in size; and most of them extend under the Atlantic.

(iii) There are also some gold-mines along the southern shore of Nova Scotia, most of them east of Halifax.

(iv) The fisheries are the richest in the Dominion. The annual value of the take is over 1½ millions sterling. **Cod**, **mackerel**, **haddock**, **salmon**, **herring**, **lobsters**, etc., are caught in immense quantities.

(a) "What are called 'Norman lines,' from 600 to 1200 fathoms long, are allowed to remain in the water from six to eight hours, and in certain seasons of the year, two fishermen, with a line of 800 fathoms, will in a few hours take five or six thousand pounds weight of fish."

(b) "Herrings in a shoal are so crowded together as to almost form a compact mass from the surface of the water to the bottom."

- (c) "Bears, foxes, moose, deer (cariboo), otter, mink, sable, hares, racoons, and squirrels abound, and with the enormous quantities of woodcock, snipe, plover, partridges, geese, ducks, and curlew, render Nova Scotia a veritable sportsman's paradise."

(v) "Though large areas of the northern and north-eastern Territories of the Dominion are sterile, through the cold, yet the prolific fisheries off the coasts of these sterile portions are to great extent a compensation for the barrenness of the soil, as this broad ocean border is more valuable than the most fertile lands."

(vi) "Wheat will not grow near the coast and corn will not ripen, so that the people are obliged to import almost all their farinaceous food."

(vii) "The wind seems to sweep the Bay of Fundy, as into a funnel, from the mild waters of the Gulf Stream, and make of a couple of counties of Nova Scotia, a garden where the plum, the pear, the best of apples, and many other such products come to perfection, all the more astonishing from the contrast which the Atlantic and the Gulf coasts of the same province offer."

## PRINCE EDWARD ISLAND

CHARLOTTETOWN.—LATITUDE 46° 18' N.

Astrakhan, Odessa, Lyons, Ottawa.

LONGITUDE 63° 7' W. Time 7.29 A.M.

25. **Prince Edward Island** (which is about the size of Norfolk) lies within the great bay formed by the shores of New Brunswick, Nova Scotia, and Cape Breton. The industries are agriculture, lumbering, and fishing. Lobsters are caught in large numbers and canned for exportation. The climate is too cold and moist for wheat. The capital and seaport is **Charlottetown**. "Prince Edward Island," says a high authority, "is a lovely spot, and resembles very much an English landscape. Instead of the log fences used in Ontario, there are hedges of English and Canadian hawthorn along the road-sides and round the farms. The houses, too, resemble the English farm-houses. The soil is of sandy clay or sandy loam, red in colour. The island has the best pasturage land on the continent of North America." . . . A large part of Prince Edward Island has been built up out of the alluvium brought down by the St. Lawrence.

- (a) "Seen from the water, the appearance of Prince Edward Island is exceedingly prepossessing—cultivated and well-wooded land, alternating with thriving villages and flourishing home-steads, the general effect greatly resembling the scenery of England."
- (b) "The province is, however, often shut off from the mainland in winter by ice. The whole island, with the exception of a few bogs and swamps, consists of cultivable land, well watered by numerous springs and rivers; and the natural fertility is greatly increased by the valuable manure known as 'mussel mud,' which the sea has provided in most of the bays and rivers. The mud is obtained by a dredging machine worked by horse-power on the ice over the beds of nearly all the rivers where oyster and mussel deposits occur. These deposits are from 10 to 30 feet thick, and are made up of oysters, mussels, decayed fish, and sea-weed. Used as a fertiliser, this material acts promptly and effectively and produces very large crops of hay."

## BRITISH COLUMBIA.

VICTORIA.—LATITUDE 48° 27' N. *Paris, St. John's* (Newfoundland).

LONGITUDE 123° 10' W. Time 3.47 A.M.

26. **British Columbia**, the “Alpine Province of the Dominion,” lies between the Rocky Mountains and the Pacific Ocean, and runs north of the United States to the parallel of 60° N. lat.—which is only two degrees north of the line of wheat. It is about 800 miles long, and has an area more than six times as large as Great Britain. “It has a fine climate, good natural harbours, large deposits of minerals, and a soil in many places of surpassing fertility. The climate is much less severe than in the eastern parts of the Dominion. The winters on the coast are windy and rainy rather than frosty ;” and this is due in a great measure “to the tropical waters of the Pacific Gulf Stream.” Only part of the river Columbia flows through this province ; and its most important river is the **Fraser**, which drains a district nearly as large as the whole of Italy. Salmon, sturgeon of fabulous size, trout, and other fish, exist in immense numbers in this river. The province is rich in timber and in minerals. The forests on the Coast Range are among the finest in the world. The capital is **Victoria**, at the south-east end of Vancouver Island—a “mountainous and heavily-timbered” island which is larger than Holland. Vancouver has a great deal of good coal. The climate is like that of the North of England. **Vancouver** is the western terminus of the Canadian Pacific Railway.—At one time Nova Scotia was said to be “east of sunrise,” British Columbia “west of sunset,” and each to lie in a different world ; but they are now joined together by the great continental railway called the Canadian Pacific.

- (a) “Such a spectacle as this coast-line (7000 miles) presents is not to be paralleled by any country in the world. Day after day, for a whole week, in a vessel of 2000 tons, we threaded an interminable labyrinth of watery reaches, that wound in and out of a network of islands, promontories, and peninsulas for thousands of miles, untroubled by the slightest swell from the adjoining ocean, and presenting at every turn an ever-shifting combination of rock, verdure, forest, glacier, and snow-capped mountains of unrivalled grandeur and beauty.”—**LORD DUFFERIN**.
- (b) “**VANCOUVER** guards the entrance to **BRITISH COLUMBIA** on one coast, just as **Newfoundland** guards it sentinel-like at the entrance to the **St. Lawrence** on the other. On these two islands float the British flag ; and at either end, at **HALIFAX** and **ESQUIMAULT** is stationed a squadron of British men-o'-war.”

(i) The greater part of **British Columbia** is filled by the magnificent ranges of the **Rocky Mountains** and the **Selkirk Mountains** on the east, and by the **Cascade Range** on the west. The lower slopes of these ranges are covered with forests of great value.

(ii) The river **Columbia** drains an area more than three times the size of Great Britain. It is 1400 miles long ; nearly half its course lies within British territory.

(iii) "The characteristic feature of nearly all the lakes of British Columbia is their great length and comparatively small breadth. They fill deep troughs in the valleys of the rivers at the heads or on the courses of which they lie. Babine Lake, at the head of the river of the same name, a tributary of the Skeena, is 87 miles in length, whilst its breadth varies from half-a-mile to 5 or 6 miles.—In the same way, most of the rivers of British Columbia are merely "chains of lakes." Of each it may be said: "It thunders and pauses, and thunders again." The Canadian Pacific Railway runs steamers on all the large southern lakes. These are all connected with each other by short lines of rail, and connected with an important branch of the Canadian Pacific Railway. This leaves Lethbridge (Alberta), crosses the Rockies by **Crow's Nest Pass** into British Columbia, and runs through the rich mining districts of Kootenay and Yale as far as Fairview.

(iv) The prevailing timber near the coast of British Columbia is the magnificent **Douglas Fir**. This tree often attains a height and dimensions which are second only to those of the Sequoia of California and the Eucalyptus of Australia. Other important commercial trees are the Western larch, the Menzies fir, the yellow cypress, and the maple.

(v) "**Minerals** form the chief wealth of the Province." **Gold, silver, coal, lead, and copper** are extensively mined. The **Kootenay** district in the south-east is the richest mineral district (centre—**Roseland**); in the north the richest districts are those of **Cariboo** and **Cassiar**.

(vi) There are many rich **coalfields**. The principal coalfield is at **Nanaimo**; and the yearly output there is over 1,000,000 tons. "Vancouver Island is practically unexplored, but is known to contain tracts of prairie capable of producing wheat, while its forests will become of value, as are already the coal-mines of Nanaimo. Both these collieries and the still larger Wellington coal-fields are close to the sea. Thus Canada possesses in Nova-Scotia on the Atlantic and in Vancouver Island on the Pacific two magnificent coaling-stations." On the mainland, the **Crow's Nest Pass**, in the south-east, is the chief field.

(vii) "**All fruits** grow excellently along the Pacific Coast." In the hotter districts, grapes, melons, and peaches "thrive admirably with irrigation."

(viii) The **salmon-fisheries** are of immense value. "A large and increasing trade is done in canned salmon." Sturgeon are numerous in the Fraser; and the inland lakes and rivers are crammed with salmon and mountain trout. "The seas, bays, gulfs, rivers, and lakes of the Province swarm with food-fisheries." The total annual value of the fisheries (river and sea) is about £2,000,000.

(ix) British Columbia has established a large inter-provincial trade with Eastern Canada, Manitoba, and the North-West Territories. She has also lines of steamers running from Vancouver to Japan, China, and Australia.

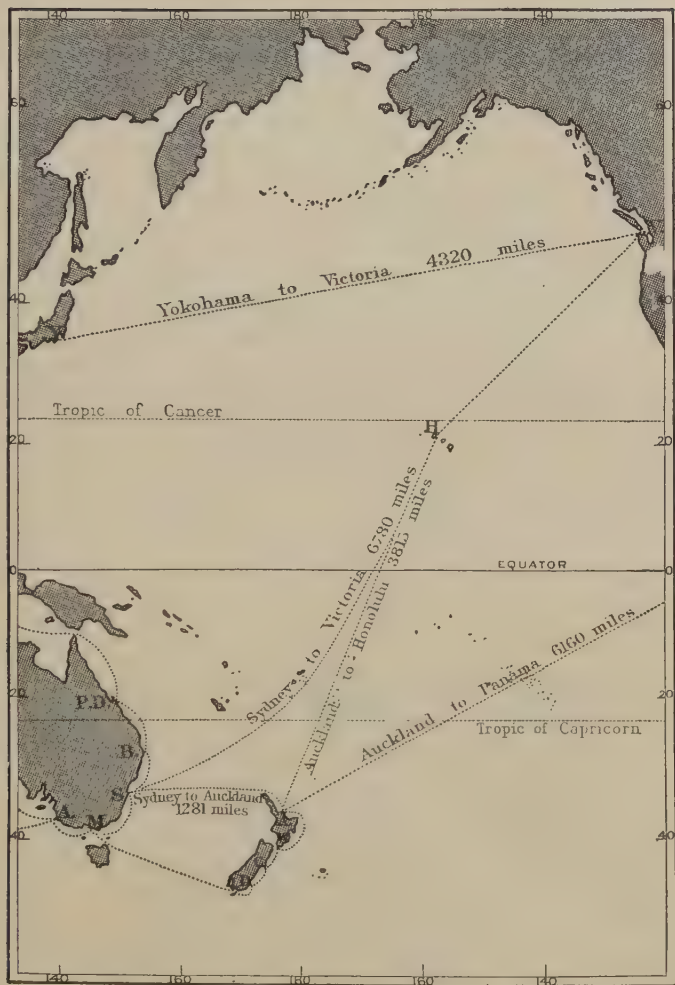
## MANITOBA

WINNIPEG.—LATITUDE 49° 56' N.

Paris, Victoria (British Columbia).

LONGITUDE 97° 5' W. Time 5.32 A.M.

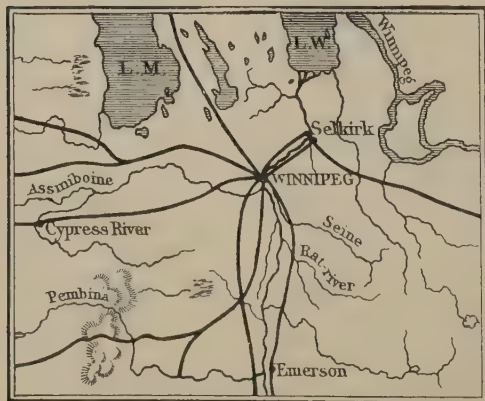
27. **Manitoba** (formerly called the "Red River Settlement") is a province which is about twice the size of the United Kingdom. From its geographical position, and also from its intrinsic wealth and splendid possibilities, it may be regarded (to quote the late Lord Dufferin)



V. = Victoria, in British Columbia—H. = Honolulu—A. = Adelaide—M. = Melbourne—S. = Sydney—B. = Brisbane—P.D. = Port Denison—A. = Auckland—C. = Christchurch—D. = Dunedin—I. = Invercargill.



as "the keystone of that mighty arch of sister provinces which spans the continent from the Atlantic to the Pacific." Manitoba is perhaps the colony of the world that has made the most rapid progress—a progress of marvellous speed—in agricultural wealth. "The soil is among the richest, if not the richest, in the world—a rich, deep, black clayey mould or loam, resting on a deep clay subsoil, just suited for raising wheat. So rich is this soil that it does not need manure for years after breaking the prairie, and in particular places where the black loam is very deep, it is practically inexhaustible. This great richness of the prairie soil has arisen from the 'excreta' of birds and animals, and the ashes of prairie fires, which have accumulated for ages, together with decayed vegetables and animal matter." The basin of Lake Winnipeg consists of alluvial plains of the richest description; these plains grow crop after crop of wheat without manure; and this wheat is of the heaviest and hardest kind. The capital and seat of government is **Winnipeg** (formerly Fort Garry), on the left bank of the Red River, where it is joined by the Assiniboine. Winnipeg (136) is, in the words of Lord Dufferin, "the half-way house of the continent, the capital of the Prairie Province, and I trust the future commercial centre of the whole Dominion." Its population is increasing rapidly every month. "What gold was to California and Australia, wheat is to Manitoba; only the harvests of



wheat yield more certain and satisfactory returns." It stands on the Pacific Railway; and new lines also radiate from it in every direction. Manitoba, with its wide, open, and almost boundless plains, has been called the **Prairie Province**.

"The milch cows and draught oxen at Red River and in Minnesota, feeding on grass alone, were generally in nearly as fine condition as any stall-fed cattle in England."

(i) **Winnipeg** is 1600 miles from Quebec. The town stands a little south of the lake, which is an immense reservoir that receives the waters of the Little Saskatchewan, of the Red River, and of scores of other smaller rivers. "Winnipeg is without doubt destined to be the Metropolis of the Central Canada of the future, lying as it does half-way between Montreal and the Pacific, in the midst of a district the soil of which is perhaps the richest in the world. It is already a railway centre of immense importance, lines radiating from it like the spokes of a wheel; and the politics of the local legislature are chiefly concerned with railroads."

(ii) Brandon and Portage la Prairie, on the Canadian Pacific, are prosperous wheat-growing centres.

(iii) **Winnipeg** will, in no long time, be one of the greatest railway centres on the face of the globe. (a) A railway from it joins the United States "Northern Pacific," and also goes on to **Minneapolis** and **St. Paul**, on the **Mississippi**. (b) A great line is projected and partly built from **Winnipeg** to **Fort Churchill** on **Hudson Bay**. (c) A third runs to **Prince Albert**, on the **North Saskatchewan**.

(iv) **Winnipeg** is also a great centre of steam-navigation. (a) It has steamers on the **Assiniboine** for 320 miles; (b) on the **Red River**, steamers ply into the United States; (c) others steam up **Lake Winnipeg** to the mouth of the river **Saskatchewan**; (d) others up the **Saskatchewan** to **Edmonton**—a distance of 1500 miles.

(v) Winnipeg is lighted with the electric light; the streets are paved with wood; bridges have been built; tramways laid; and enormous improvements are introduced every month. "Its position makes it the trade entrepôt for the western half of Canada."

THE PRAIRIES.

"These are the gardens of the Desert, these  
The unshorn fields, boundless and beautiful,  
For which the speech of England has no name;  
The Prairies, I behold them for the first,  
And my heart swells, while the dilated sight  
Takes in the encircling vastness. Lo! they stretch  
In airy undulations, far away,  
As if the ocean, in his gentlest swell,  
Stood still, with all his rounded billows fixed,  
And motionless for ever.—Motionless?—  
No—they are all unchained again. The clouds  
Sweep over with their shadows, and beneath,  
The surface rolls and fluctuates to the eye."

"Still this great solitude is quick with life,  
Myriads of insects, gaudy as the flowers  
They flutter over, gentle quadrupeds,  
And birds, that scarce have learned the fear of man,  
Are here, and gliding reptiles of the ground,  
Startlingly beautiful . . . . . The bee,  
A more adventurous colonist than man,  
With whom he came across the eastern deep,  
Fills the savannas with his murmurings,  
And hides his sweets, as in the golden age,  
Within the hollow oak."

The increase of dryness in the air has the same effect as an increase of warm clothing for man and beast, and we suffered less from a temperature of 10 degrees below zero, lying in tents, without fire, than we would have done in Ontario with 10 degrees of frost."

**SASKATCHEWAN.**

REGINA.—LATITUDE 51° N.

London, Cracow.

LONGITUDE 104° 50' W. Time 5.0 A.M.

28. **Saskatchewan**, which includes the old district of Assiniboia, lies west of Manitoba, and stretches south to the United States border, and north to the parallel of 60°. It has an estimated area of 250,000 square miles (about twice the size of the United Kingdom), and a population at the census of 1911 of 492,432. The province is magnificently watered, containing the mighty twin streams of the Saskatchewan in the south, and the upper course of the Churchill River in the north. In the south the province is treeless, except in the deep valleys, and consists of far-stretching grassy plains or prairies. North of the treeless prairies comes a belt of open grassy glades, alternating with poplar groves, and north of this again is the coniferous forest of pines and larches. The whole country gradually rises from east to west. The capital is **Regina** (30) in the south, which stands on two great railways, the Canadian Pacific and the Canadian Northern. The principal products are **grain** (especially wheat) and **cattle**, the agriculture being pursued in the east, which is a continuation of the grain-growing districts of Manitoba, and the cattle-ranching in the west, where the snowfall is light and the winter much milder.

(i) The climate, particularly in the east, has a wide range—from 90° to -40° at its greatest extremes. The rainfall is not heavy, but is generally sufficient for all purposes of agriculture, and there is an unusual amount of sunshine at all periods of the year.

(ii) Besides the capital **Moose Jaw** (13), **Saskatoon** (32) and **Prince Albert** (6) are rising communities. The two latter towns are important centres on the Canadian Northern Railway. Prince Albert has a large saw-milling industry, and one mill can turn out fifteen car-loads of "lumber" a day.

**ALBERTA.**

EDMONTON.—LATITUDE 53° 45' N.

Sheffield, Warsaw.

LONGITUDE 113° 20' W. Time 4.27 A.M.

29. **Alberta** lies on the eastern slope of the Rocky Mountains. Here the plains and prairies have ended, and Alberta is a land of magnificent mountain scenery. Numerous rivers which flow into it

from the mountains have waters as clear and blue as the sky above them. The northern part of the province is drained by the Peace and Athabasca rivers, which unite to form the Slave river. The area is about the same as that of Saskatchewan, and the population, at the census of 1911, was 374,663. Much of the soil is very fertile, and there are many large forests, but Alberta is specially noted for its grazing and dairying industries. Its clear streams and luxuriant grasses, combined with the warm *Chinook* wind, make it a very paradise for cattle, and, though Alberta is in the latitude of Labrador, stock range outside winter and summer without any shelter. Thanks, too, to the same wind good hard wheat is grown in the far north of the province. Wheat, timber, and dairy-products from the government creameries are the main staples of trade. The capital is **Edmonton** (24<sup>1</sup>) on the Canadian Northern Railway.

(i) The province is well served by two great systems of railways—the Canadian Northern and the Canadian Pacific in the south. On the latter line stands **Calgary** (43), a most important centre for cattle and horse-ranching, as well as a manufacturing centre.

(ii) West and north-west of Edmonton there is an abundance of timber, and the rivers bring the logs to the mills which are alongside the railway. At Edmonton there are large meat-packing factories, the coal for which (an excellent household variety) is mined all round the town. The province also contains large coalfields at **Morinville**, on the Canadian Northern, at **Cochrane** on the main C.P.R. line and at **Lethbridge** on a branch. Food, timber, and fuel are sure in no long time to make Alberta into an important manufacturing country.

(iii) "The growing communities along the Pacific Railway have an air of progress; and the prosperity of the neighbourhood may be gauged by the size of the grain elevators which speak to the productiveness of the surrounding country. . . . In the ranching country of the foothills, the bunch grass which covers the prairie as far as the eye can reach looks as little nutritious as the arid vegetation of Central Australia or of the South African Karroo; but in reality there is not better pasturage in the world."—**DILKE**.

(a) "The great North-West, however, is not the 'terra incognita' it was a few years ago. Its vast plains have been traversed; its rivers and lakes carefully traced, and treasures of iron, and coal, salt, and even gold, have been laid bare; and its rich expanses of fertile prairies are now known to possess the capability of supporting a numerous population, equalling in numbers those now densely thronging the British Isles."

(b) "In many parts of the country strawberries are in such great quantities that it is no unusual thing to find the cart-wheels streaming with their juice."

(c) "While crossing the great plains north of the Qu'Appelle in July 1879, we found mushrooms by the cartload, and the past season we used them every day for three weeks while travelling at least 200 miles in an easterly direction."

**30. Yukon Territory.**—This territory, which was constituted in 1898, when the great Klondike gold-fields first became known,

<sup>1</sup> 1911 census. Edmonton's population was estimated at 53,000 in 1913.

occupies the north-western extremity of the Dominion. Its area is 207,000 square miles, but its population is only 8512. The great river Yukon (or Pelly), after which the territory is named, is navigable for river-steamers from one of its sources in Teslin lake (2400 miles) to the Bering Sea. The country, being a northern extension of the Rocky Mountain system, is mountainous and rocky, but contains extensive forests. The principal product is gold, and Dawson is the capital and chief mining centre.

**31. The North-West Territories.**—These comprise all the unorganised territory between the Yukon and Hudson Bay. The total area is estimated that 1,242,224 square miles—roughly a third of all Europe, but in this huge area only 17,000 people live. Round the shores of the Arctic Ocean the Territories are a “tundra” country, a region of mosquito-infested swamps in summer, and in winter a cheerless waste. Then come the “Barren Lands,” emphatically so-called, for they are dreary treeless wastes, often covered with stones—a region where the summer is very short and the winters very long and severe. Some stunted spruce and larch occur here, but to the south of these lands lies the northern edge of the great coniferous forest. The Territories produce furs, which the roving Indians and Eskimo capture and a few white traders buy.

(i) The Arctic coast is haunted by the white bear, and the Barren Lands are inhabited by vast herds of cariboo (reindeer) and by smaller herds of musk-ox.

(ii) The North-West Territories present a striking contrast to Saskatchewan and Alberta—the two settled provinces of the North-West. The former produce only furs; they may prove to be rich in minerals, but probably in nothing else. The two latter districts, however, possess every factor of prosperity—agricultural, animal, forest and mineral wealth—and have the C.P.R. and the Canadian Northern Railway to aid in their development.

**32. Large Towns.**—The cities of the Dominion are not, in general, very large; because the chief industry as yet is agriculture, and this requires the population to be spread over the whole country. Four towns have a population of over 100,000—**Montreal, Toronto, Winnipeg** and **Vancouver**. Next come **Ottawa, Hamilton** and **Quebec** with over 70,000; and in the third rank **Halifax, London, Calgary, St. John, Victoria** and **Regina**, all over 30,000. Thirty years ago the five western towns probably did not number 50,000 people between them.



(i) **Montreal** (470) is much the largest city in Canada. It stands on an island at the head of the ocean navigation of the St. Lawrence, and is the commercial and financial centre of the Dominion. It stands at the east end of the canal which avoids the Rapids of the St. Lawrence. It is a well-built city, with several very noble edifices—cathedrals, churches, and public buildings. "It used to be said in the old days that there were two advantages which Montreal could not steal from Quebec—the citadel and the tide. The citadel remains as an attraction to the tourists of the whole world; but the deepening of the channel has robbed Quebec of the control of the ocean shipping trade, and Montreal has become the point of transfer for Western freight and the point of distribution of import trade. . . . If Quebec is the most picturesque city, Montreal is the most sumptuous in appearance of all the towns of the American continent. . . . The reason of the increasing prosperity of the town is that its naturally fine position has made it both a centre of railway communication and the head of the navigation of the St. Lawrence; and the sight of Atlantic liners and British men-of-war lying off the wharves makes it difficult to realise that the ocean is a thousand miles away, and the nearest salt-water 250 miles down the St. Lawrence."

(a) It is sometimes said that the name is a *corruption* of the words Mount Royal. This is a mistake. *Real* is the Norman-French form of the word *royal*; and is found in English in the word *real-m*. It received its name in 1535 from Jacques Cartier, the discoverer of Canada, who was a Frenchman of Normandy.

(b) "MONTREAL is a twofold city. The contrast which is presented by the Dominion as a whole—the contrast of two races engaged in a struggle for predominance, is reproduced in a more intense form in this great city. Two nationalities, two languages face each other (as they do in some Swiss towns), and give rise to keen rivalries in religion, in politics and in social affairs. These rivalries rarely end in serious conflicts: they lose their bitterness in their continuous nature, and generally spend themselves in electoral agitations. The French Canadians preponderate in number; and their numbers increase every year by the excess of births over deaths. The French outnumber those of British birth in the proportion of 3 to 2."—RECLUS.

(ii) **Toronto** (376), on Lake Ontario, is the capital of the Province of Ontario, and the leading commercial city of "Upper Canada." It stands on a beautiful circular bay. It is the most intelligent and best educated city in the Dominion. Toronto is gaining rapidly on Montreal in population. Toronto has more than quadrupled itself in the last 30 years.

## POPULATION.

	1871.	1881.	1891.	1901.	1911.
MONTREAL . . . .	107,225	140,682	216,650	267,780	470,480
TORONTO . . . .	58,092	86,445	181,220	208,040	276,538

(iii) **Winnipeg** (136), *vide* pp. 234-5.—**Vancouver** (100) is *not* on Vancouver Island, but stands on the mainland of British Columbia and is the terminus of the C.P.R. It is situated on Burrard inlet, one of the best harbours on the Pacific Coast, and is the point of departure for Japan and New Zealand steamers.

(iv) **Ottawa** (87), on the right bank of the Ottawa, is the federal capital of the whole Dominion, and the seat of the Dominion Parliament. The Houses of Parliament are the most magnificent buildings in the place. Fifty years ago Ottawa was a lumberman's shanty; it is now a beautiful city.

"The main industry of Ottawa is the timber trade. The saw-mills are the largest in Canada, and are worked night and day during the summer, but are shut up when the water is frozen in winter.

(v) **Hamilton** (81), at the south end of Lake Ontario, is a flourishing town in a fertile district. Between it and Clifton lies a very rich fruit-growing district. It manufactures hardware.



(vi) **Quebec** (78) is the most historic city in Canada. Its citadel, on the head of Cape Diamond—a precipitous cliff 333 ft. in height—guards the entrance to the St. Lawrence. The aspect of the city is Norman-French:—its architecture, scenery, fortifications, the look of the people, the language, all remind one of Normandy. It is not the seaport of the St. Lawrence; and hence makes little progress in commerce and wealth. But it is the capital of “French Canada.”

(vii) **Halifax** (46) is the capital of Nova Scotia, and the Atlantic seaport of the Dominion. It is also the great North-American naval station of Great Britain; and, most important of all, the Atlantic terminus (via the Intercolonial) of the C.P.R.

(viii) **London** (46) is a prosperous town, in the middle of a fertile and smiling country, near the southern end of the peninsula of Ontario. It refines petroleum.

(ix) **Calgary** (43) is the largest town in Southern Alberta. It is an important manufacturing town. It stands on the C.P.R., 3380 feet above the sea.

(x) **St. John** (42) is the largest city and seaport in New Brunswick. It is the chief ship-building and ship-owning city of the province.

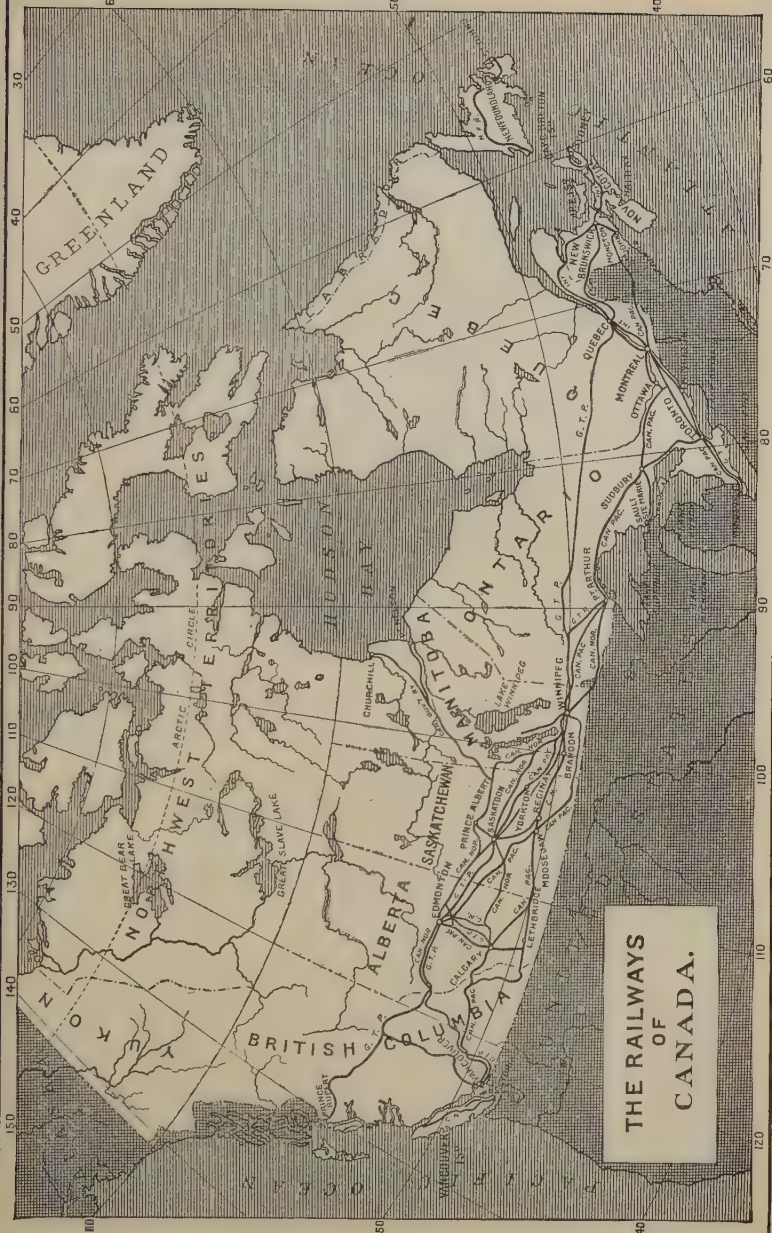
(xi) **Victoria** (31) lies on a good harbour at the south end of Vancouver Island. It is the capital of British Columbia. Three miles to the west of it is the great naval harbour of Esquimaux.

**33. The Comfort of the People.**—Food in the Dominion is much cheaper and more abundant than in the United Kingdom; house-rent is a little cheaper; and clothing is somewhat dearer. On the whole, health and comfort in Canada are easier to procure than in England. “The necessities of life are cheaper than in England, the luxuries dearer. Prices are lowest in New Brunswick and Nova Scotia, and are generally highest in British Columbia.”

(i) Throughout Canada, **beef** is from 3d. to 8d. per lb.; **bread**, 5d. to 8d. the four-pound loaf; **milk**, 2d. to 4d. a quart; **mutton**, 3d. to 8d.; **sugar**, 3d. to 4d. a lb.; **tea**, 13d. to 8s. 2d. per lb.

(ii) “The coins used in Canada are dollars and cents. One cent. =  $\frac{1}{2}$ d.; one dollar = 4s. 2d.”

**34. The Railway System of Canada.**—The Dominion of Canada possesses a magnificent system of railways. The total network is about 26,000 miles long. The longest and the most important line is the **Canadian Pacific Railway**, which was completed in 1885. This gives unbroken railway communication from ocean to ocean—from the Atlantic to the Pacific—within the territory of the Dominion itself. This railway, from Montreal to Vancouver, is 2908 miles in length. Three other Canadian railways are of special importance. One is the **Intercolonial Railway**, between Halifax and Montreal—a distance of about 834 miles. The other is the **Grand Trunk**, which connects Montreal on the one hand with the great commercial United



States city of Chicago, and with Portland (in United States Maine) on the other. The third is the **Canadian Northern**, which operates principally in the three western provinces of Manitoba, Saskatchewan and Alberta. In addition to these, there are branch railways in every direction, so that there is hardly a town, however small, which does not connect with the great commercial centres of Canada and the States.

"Canadian railways pass through the least inviting sections of the country. The railway company seeks out the least improved and therefore least expensive track, also in most cases the neighbourhood of valleys not yet reclaimed from swamp. He that travels by rail from Halifax to Windsor (Nova Scotia), from Quebec to Montreal, from Prescott to the capital at Ottawa, or on almost any route, and forms his opinion of the country by the rocky or swampy or sandy deserts he passes through, falls into serious error."

**GRAND TRUNK PACIFIC RAILWAY.**—The Grand Trunk in 1903 projected another trans-continental railway. This line is to run in a north-westerly and westerly direction from Ontario, through Keewatin, Manitoba, Saskatchewan, Alberta, Athabasca, and British Columbia, to some point on the Pacific, probably near Port Simpson on Bute Inlet. Branches from the main line are to run south to Winnipeg, Regina, and Calgary.

(i) The **Canadian Pacific Railway** is superior to the two Pacific railways in the United States (the Northern Pacific and the Union and Central Pacific), in two respects: (a) It crosses the Rocky Mountains through lower passes; (b) It has a much shorter length of mileage at high levels. The Canadian Pacific has only 115 miles at a level above 4000 feet; while the Union and Central has 1280 miles. Hence the Canadian Pacific trains are less frequently stopped by snow-blocks. . . . "For the first time in the history of Greater Britain, it is possible to travel from England to Australia by an overland route (in which that phrase, from the proportion of land to sea on the passages, has a real significance) without traversing a yard of soil that is not British."

(ii) The highest point reached ("Kicking Horse Pass") by the Canadian Pacific is 5300 feet above the level of the sea; the highest point on the Union-and-Central is 8240 feet.

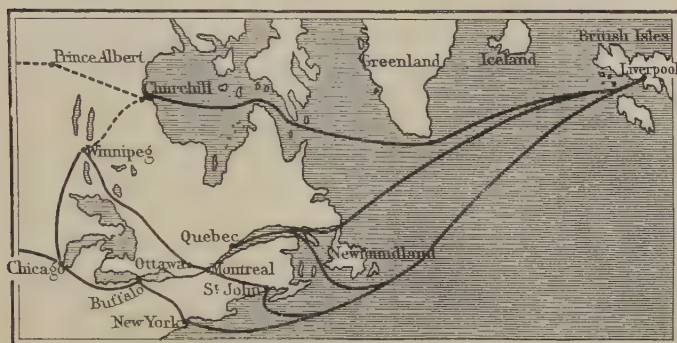
(iii) The distance from Vancouver to Halifax, by the Pacific and Intercolonial Railways, is 3742 miles. The Intercolonial Railway links the British naval station of Halifax with the commercial metropolis of Eastern Canada—Montreal.

(iv) The chief Canadian towns touched by the **Grand Trunk Railway** are, in their order, Montreal, Kingston, Toronto (with a branch through Hamilton, London, and Windsor) and Port Sarnia.

(v) "Stretching a tape line over a terrestrial globe, it will be seen that the distance between Liverpool and New York is about ninety miles more than the distance from Liverpool to the Nelson River, and this point is half-way to the Pacific Ocean. Port Nelson, on the western side of Hudson Bay, is distant from Liverpool 2941 miles, New York is 3040 miles—a difference of ninety-nine miles in favour of the Hudson Bay route in the sea voyage. Between Winnipeg and Liverpool, *viâ* Hudson Bay, there would be a saving of inland carriage, as compared with the route *viâ* New York or Halifax, of about 2000 miles—a consideration which is likely to produce its effects in hastening the completion of Hudson Bay and Nelson River Railway."

(vi) "Professor Hind considers a Canadian Archangel may be established on Hudson Bay, and that with strongly built steamers, properly handled, and using the electric light in the latter part of the season, the navigation of this strait is perfectly practicable during the months of June, July, August, September, and October."

(vii) "The distance from Churchill Harbour to Liverpool, *viâ* Hudson Strait, is about 2926 miles ; from Montreal *viâ* Cape Race, it is 2990, and from New York, *viâ* Cape Clear, 3040 miles, showing 64 miles in favour of Churchill as compared with Montreal, and 114 miles as compared with New York."



(viii) The progress in railway construction has been as follows :—

1850	.	.	.	.	.	.	.	38 miles.
1860	.	.	.	.	.	.	.	2173 "
1870	.	.	.	.	.	.	.	2679 "
1880	.	.	.	.	.	.	.	6981 "
1890	.	.	.	.	.	.	.	18,000 "
1900	.	.	.	.	.	.	.	17,481 "
1912	.	.	.	.	.	.	.	26,727 "

## THE COMMERCIAL PRODUCTS AND COMMERCE OF CANADA

1. **Products.**—As is the case with all young countries, **agriculture** is the chief industry in the Dominion of Canada ; and **agricultural products** form the staple of its industry. About 32,000,000 acres are under cultivation ; but this is only the merest fraction of the whole area of this vast country. More and more land, however, is getting taken up every day. The number of **cattle**, **horses**, and **sheep** is also increasing every year. The value of the fisheries, rich and extensive as they are, fluctuates from year to year ; but they amount to about £6,000,000. The Dominion is very rich in minerals ; but they have not as yet been worked to any adequate extent. **Coal** is the principal mineral product ; and the coal-bearing area of the North-West

Territories alone is larger than the whole of England and Wales taken together. **Gold, silver, copper, nickel, lead, and iron** come next in value. **British Columbia and Nova Scotia** are the most highly mineralised provinces.

(i) Most of the Canadian farms are very small : they average from 50 to 200 acres.

(ii) In Manitoba, in the year 1910, over 5,500,000 acres were taken up by settlers, most of them from the United Kingdom. Much of the land is virgin soil; and it has been known to produce 32½ bushels to the acre.

(iii) **Cheese** is the most important agricultural product; and its amount increases with great rapidity. From 1891 to 1901 the export of cheese increased by over 200 per cent.

(iv) The total annual value of the Canadian fisheries seems to amount to about £6,000,000. The most valuable fishes are **cod and salmon**, nearly one million's worth of each of which is taken every year. **Nova Scotia** is the leading province in sea-fishing: **British Columbia** (centre—New Westminster) is first in salmon catching and canning.

(v) The annual value of Canadian minerals is over £26,000,000. **Coal, gold, silver, nickel and copper** are of the greatest value. Coal is principally found in **Nova Scotia** and **Cape Breton**, in **British Columbia** (**Nanaimo** and **Crow's Nest Pass**), in the **North-Western Territories** (**Lethbridge** and **Cochrane**). The chief gold-fields are in **British Columbia** (**Kootenay district**), and in **Yukon territory**.

2. **Trade.**—"The exports of the Dominion consist principally of its **natural products**, and the combined values of agriculture, animal, fishery, forestry and mineral domestic produce constitute 88 per cent. of the total exports of domestic produce. On the other hand, imports into Canada consist largely of **manufactured articles** and of materials used in railways and other constructive enterprises, which represent capital outlays for the production of future wealth."—*Canada Year Book*, 1912.

3. **Exports.**—The total export trade of Canada in 1891 was valued at £19½ millions; in 1912 it rose to £63 millions, and in 1913 to £78 millions. Two specific articles of export trade stand out pre-eminently; these are **wheat and flour**, and **timber**. In the figures for 1912 these are valued as follows: Wheat £12·5 millions, flour £3·2 millions, and timber £8·1 millions. In the next rank stand **cheese and fish** (£4—£3 millions).

(i) Important animal products, both for food and other purposes, in the export list are **bacon, hides, living animals and furs**.

(ii) The **metal export** amounted in 1912 to over £8 millions, and included silver, gold,



copper, coal, nickel and asbestos (ranging from silver £3 million, to asbestos £400,000).

(iii) Canada also exported in 1912 over £7 millions' worth of **manufactures**, the most important item of which was **wood-pulp** for paper-making.

**3. Imports.**—The total imports of the Dominion in 1912 amounted to over £109 millions. The main features of Canada's import trade are (far above all) **manufactured goods**, which she cannot yet produce; **sugar, tea, etc.**; and, oddly enough, **coal and breadstuffs**, both of which she is herself rich in. But the coal import is to be explained by the fact that at certain points in Canada (*e.g.* in the manufacturing Lake Peninsula of Ontario) it is cheaper to import coal from the United States than to transport it for long distances from the Canadian fields. It is cheaper, for instance, for the manufacturing towns of Toronto and Hamilton to use Pennsylvanian coal than to get it from Nova Scotia or Alberta. As to the breadstuffs, **maize** comprises the bulk of this, and (except on the Ontarian Lake Peninsula) the Canadian climate is not warm enough for maize.

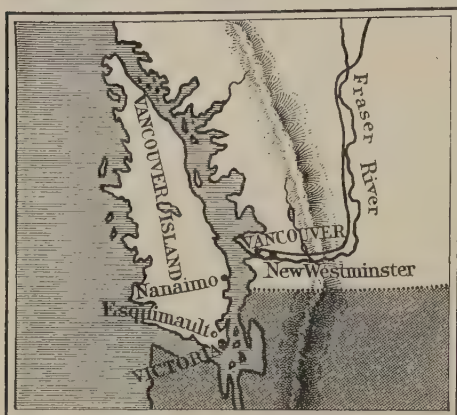
**4. Ports.**—The great ports of the Dominion are **Quebec and Montreal, Halifax and St. John** on the Atlantic side. But Montreal and Quebec are closed by ice for four months in the year, and their place is then taken by Halifax. . . . The great Pacific ports are **Vancouver, Victoria, Nanaimo, and Esquimault**. . . . The great inland ports on the so-called "North-



THE ATLANTIC PORTS OF THE DOMINION



West Passage" are **Kingston**, **Toronto**, and **Hamilton** on Lake Ontario, **Port Arthur** on Lake Superior, and **Winnipeg** on the Red River.



### THE PACIFIC PORTS OF THE DOMINION

couver to Japan and China, and brings London within three weeks' journey of Japan. The Canadian-Australian Line runs from Vancouver and Victoria to Honolulu, Brisbane, and Sydney.

(iii) Montreal is by far the largest port in the Dominion, and the duties collected there are more than four times as large as those collected at Halifax.

(iv) Esquimaux is the headquarters of the British Navy in the Pacific, as Halifax is in the Atlantic.

(i) The chief canals are : the Rideau (Ottawa to Kingston); the Welland (avoiding Niagara Falls); and the Sault St. Marie (avoiding the rapids between Lakes Huron and Superior).

(ii) **Atlantic Lines.**—The Allan, Beaver (now purchased by the C. P. R.) and Dominion Lines run from Liverpool and Glasgow to Quebec, Montreal, and Halifax (in winter to Halifax and St. John, N.B., only). **Pacific Lines.**—The Empress Line, in connection with the Canadian Pacific, runs from Van-

## CONTRAST OF CANADA WITH AUSTRALIA.

### CANADA.

1. Much and regular supplies of rain.
2. Irrigation required but seldom.
3. Enormous and deep lakes and rivers.
4. Comparatively small areas unproductive.
5. Great facilities for travelling by water.
6. Climate of extremes.
7. Products of the temperate zone.
8. A long coast-line with additional coast on its numerous lakes and rivers.
9. Large and deep harbours.
10. Varied fauna.

### AUSTRALIA.

1. Very irregular supplies.
2. Irrigation almost everywhere necessary.
3. A few lakes, shallow; and very few rivers.
4. Very large areas unproductive.
5. Travelling chiefly by rail.
6. Climate of great warmth and dryness.
7. Tropical and sub-tropical products.
8. Short coast-line, with few large openings.
9. Good harbours.
10. Uniform fauna.

## THE CONDITION OF CANADA

1. **Area** (land and water) . . . . . 3,653,946 square miles

(i) The total area of the Dominion is thirty times that of the United Kingdom.

(ii) Out of this total area 605,235 square miles (= five times the United Kingdom) are water—rivers, lakes, etc.

2. **Population** (1911 census) . . . . . 7,206,643

There are only two towns in Canada with a population of over 200,000. There are five towns with over 50,000. There are about 100,000 Indians in the Dominion.

3. **Exports** (1912) . . . . . £63,000,000

The six leading exports (excluding gold), are wheat and flour, timber, cheese, fish, silver and bacon.

4. **Imports** (1912) . . . . . £109,000,0005. **Trade with Great Britain** (1912) . . . . . £63,500,000

Of this total £27·9 millions was for imports from the United Kingdom, and £35·5 millions for exports to the United Kingdom.

6. **Trade with the U.S.A.** (1912) . . . . . £124,500,000

(i) Of this total £91 millions was for imports from the U.S.A. and £33 millions for exports to the U.S.A.

(ii) It will be noticed that in spite of the immense advantage of proximity enjoyed by the United States, the United Kingdom's share in the Canadian trade is more than half that of the U.S.A.

7. **Manufactures** . . . . . Growing

The chief manufactures for export are those of agricultural implements, leather, and wood-pulp.

8. **Communications (internal)** . . . . . Magnificent

(i) Canada has a system of canal, river and lake navigation, stretching from the Atlantic Ocean to the head of Lake Superior. A vessel could sail the whole way from Liverpool to Port Arthur. The railways amount to 26,000 miles.

(ii) There were in 1912 over 182,000 miles of telegraph line. There were also over 889,000 miles of telephone wire, and over 370,000 sets of instruments. In other words, every 19 Canadians had a telephone.

9. **Communications (external)** . . . . . Excellent

(i) On the Atlantic regular lines run from Glasgow and Liverpool to Quebec, Montreal, and Halifax in the summer, and in the winter to Halifax and St. John.

(ii) On the Pacific lines run from Vancouver to Japan, China, Australia, Hawaii, and the Fijis.

## NEWFOUNDLAND

ST. JOHN'S.—LATITUDE 47° 34' N. Paris,

Victoria (British Columbia), Quebec.

LONGITUDE 52° 40' N. Time 8.32 A.M.

1. NEWFOUNDLAND.—This “outpost of the continent of North America” at the entrance to the Gulf of St. Lawrence, is an island about one-third larger than Ireland. The coast line is very deeply indented ; and the south-east part of the island is almost cut off from the main body. As the outpost of the continent of North America, it is the nearest American land to Europe, Cape Race being only 1650 miles from Cape Clear in Ireland. Most of the country is an undulating table-land, consisting chiefly of barrens and marshes, intersected by countless rivers and lakes. The population is about 242,000—less than that of Nottingham. There is much good land on the borders of the lakes and rivers ; some very fine timber ; and a good deal of coal, copper, and other minerals. Fishing is, however, the chief occupation of the people. The chief town is **St. John's** (35), on the east coast. Newfoundland is a separate colony, and does not form part of the Dominion of Canada. It is the oldest British colony, for it was formally occupied by Sir Humphrey Gilbert in 1583, in the name of Queen Elizabeth.

2. **Land.**—“The people of Newfoundland were, until recent years, so exclusively engaged in fishing, and it was so much the interest of many employers of labour, by representing the interior to be hopelessly barren, to keep the inhabitants on the sea-coast, that the heritage of vast areas of cultivatable land came upon them as a surprise ; and we at home scarcely yet realise these unexpected resources in the oldest of our colonies. There are at least five million acres of such land, which, when rendered accessible by railroads, must not only enormously increase the revenue of the colony, but enable it to play a noble part in aiding to provide settlements for the surplus population of the mother country.”

“Seen from the ocean, the shores of Newfoundland have generally a rock-bound appearance, but the line of cliffs 200 or 300 feet high, is broken by magnificent bays running in some instances 90 to 100 miles inland, and throwing out offshoots in all directions. Thus, although the

circumference of the island, measured from headland to headland, is about 1000 miles, the actual length of the coast line is more than twice as great. As the shores of many of the bays are covered with dark green forests to the water's edge—the bays being studded with islands—the aspect of much of Newfoundland is picturesque and striking. Leaving the coast, however, and sailing up the deep bays, the traveller finds himself amid scenes of great beauty, the vast expanse of water studded with innumerable islands, high hills clothed with verdure to the water's edge meeting his gaze on every side. The interior consists of an elevated undulating plateau, here and there traversed by low hills, the surface being diversified with valleys, woods, lakes, ponds, and marshes. Much of this is a savannah country, sustaining vast herds of reindeer. The Long Range, the principal mountain chain, has peaks more than 2000 feet high, and extends along the western side of the island for nearly its entire length."

(i) The Icelanders landed on the shores of Newfoundland in the year 1000.

(ii) The rivers abound with excellent salmon. The largest river in the island is only 150 miles long—the "River of Exploits." The lakes are almost innumerable. The surface covered with fresh water forms one-third of the whole island.

(iii) "Newfoundland is remarkable for a number of isolated sharply peaked summits which rise abruptly from the level plain, and also for the immense number of lakes and ponds, which occupy nearly a third of the whole surface. The Exploits, its largest river, is 150 miles in length, and has a drainage area of between 3000 and 4000 square miles. The valley through which it flows contains large areas of fertile land capable of yielding crops of all kinds, and in many places is covered with pine forests containing timber of large growths."

(iv) The climate is good, the heat of summer being never very great, nor the cold of winter unbearable. The fogs on the Grand Banks of Newfoundland do not approach the island, unless a south-east wind blows. Barley and oats grow everywhere—but not wheat; the even and moist temperature encourages the regular growth of grasses.

(v) "In addition to the reindeer, the wolf and black bear are found in the interior; the fox (black, silver, grey, and red), beaver, otter, hare, weasel, bat, rat, mouse, and musquash or musk-rat, are numerous. . . . It is estimated that there are 300 species of birds in the island, most of them migratory. Among them may be enumerated the eagle, hawk, owl, woodpecker, swallow, kingfisher, golden plover, six species of fly-catcher, and the same number of thrushes—warblers and swallows in great variety, finches, ravens, jays." . . . "The interior abounds in grouse, wild duck, wild geese, curlew, snipe, etc., whilst the lakes swarm with splendid trout, making this colony a very paradise for sportsmen; and there are noble and countless herds of cariboo."

(vi) The harbour of *St. John's* is one of the very best on the Atlantic coast. In it the largest ships can ride in safety. *St. John's* is the centre of the fishing-trade of the island.

**3. The Grand Banks of Newfoundland** are one of the wonders of the world. They form the largest submarine plateau on the face of the globe. The sea over them is richer in fish—especially cod—than any other part of the ocean. The cod and seal fisheries are the largest in the world. The Banks are 600 miles long, 200 broad, and larger than the whole of Italy. These "preserves" have been left to fishermen from other countries; and it is the shore-fishery that the Newfoundlanders cultivate most. The cod-fishing opens in June, and lasts

till the middle of November.—The fogs are caused by the condensation of the warm moist air over the Gulf Stream where it meets the cold air over the icy currents from Baffin's Bay.

"The famous **GRAND BANKS** swarm with cod and every other variety of fish. These banks form an extensive submarine elevation of the face of the globe; in their full extent they occupy 6° of longitude, and nearly 13° of latitude, being over 600 miles in length and 200 miles in breadth, with a depth of water varying from 10 to 160 fathoms."

(i) "It is a dreary locality, and the almost constant fog and drizzling rain, the doleful sound of the fog-horn, with ships' guns calling their crews, the troubled ocean, the ships rolling almost under the waves, as they ride at anchor by their hempen cables, steadied by their main or lugsails in addition to their moorings,—all these make an impression on a stranger which he never after forgets. . . . And he is surprised when he is told that for ten months in the year all the fog and damp of the Banks goes to the other side of the Atlantic, while we (in Newfoundland) never have the benefit of it unless what we call the out-wind blows."

(ii) All the Atlantic Telegraph Cables from Europe terminate in Trinity Bay.

(iii) The **Labrador Coast** forms part of the government of Newfoundland. The coast fringe of Labrador is inhabited—if it can be said to be inhabited at all—by a few Eskimoes.

**4. Products.**—Newfoundland—a vast rolling table-land, which consists largely of barrens and marshes, intersected by countless rivers and lakes—cannot and does not produce much. Its chief wealth consists in what it can draw out of the water. Hence, of the small total population, by far the largest number are engaged in the fisheries. But wealth in minerals, good soil and abundant timber produce mining, agriculture, and an important industry of making wood-pulp for paper.

**5. Exports.**—The chief export is **fish**—mostly cod. The total exports for the year amount to about £2,300,000; and of this sum the products of the fisheries absorb about 90 per cent. The chief exports are **dried cod** (far above all), **cod-oil** and **seal-oil**, **tinned lobsters**, and **seal-skins**. There is also some export of **minerals** (iron pyrites, copper, and iron ore)—an export that is likely to increase.

(i) About a third of the export trade is done with Great Britain. Most of the dried fish goes to the Catholic countries (which eat fish on Fridays)—Portugal, Brazil, and Spain.

(ii) The farming is done chiefly for the fishers and miners; and there are no agricultural exports.

**6. Imports.**—By far the largest import is that of **clothing materials** (woollens, cottons, etc.); and next to this comes that of **flour**; next **molasses**; and next **salt pork**.

(i) The imports are about evenly divided between Canada, the United States, and Great Britain—with a slight superiority in favour of Canada.

(ii) Connection is maintained with Canada by a railway across the island from **St. John's** to **Port aux Basques** in the south-west corner. Thence lines of steamers run

## THE CONDITION OF NEWFOUNDLAND

1. **Area** . . . . . 42,734 square miles

(i) This is about one-third larger than **Ireland**.

(ii) A strip of the **Labrador coast** is included in the Colony.

2. **Population** . . . . . 238,670

(i) In addition there are about 4000 persons in **Labrador**.

(ii) The largest town—**St. John's**—has 35,000 inhabitants.

3. **Exports (1911)** . . . . . £2,300,000

The chief exports are cod, cod-oil, seal-oil, seal-skins, tinned lobsters, and minerals.

4. **Imports (1911)** . . . . . £2,600,000

The chief imports are woollens, cottons, flour, and pork.

5. **Trade with Great Britain** . . . . . £1,000,000

Great Britain imports into Newfoundland rather more than she buys from it.

6. **Communications** . . . . . Fair

(i) There are 770 miles of **railway** in the island.

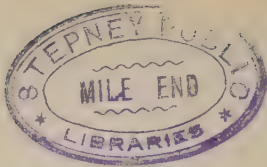
(ii) Steamers call fortnightly at **St. John's** for England; and from **Port aux Basques** in the south-west there is a daily service of ferry-steamers to **Cape Breton**.

(a) The "**French Shore**."—By the Treaty of Utrecht, 1713, the French were permitted "to catch fish and dry them inland" on the east coast from Bonavista to the northern extremity of the island, and then down the west coast to Point Riche, and afterwards to Cape Ray. This stretch of coast is known as the "**French Shore**"; it includes nearly all but the southern coast of the island. Over this coast-line the French once claimed exclusive rights.

(b) The French interpreted the right to "catch and dry fish" as a right to erect on the coast lobster-tinning factories; as a right to forbid (or attempt to forbid) any one else—*i.e.* the Newfoundlanders—doing the same; as a right to exclude the people of the island from the mineral wealth which is known to exist along the French shore—*e.g.* coal at **St. George Bay** on the south-west.<sup>1</sup>

<sup>1</sup> In 1904 France renounced these exclusive rights.





## MINOR POSSESSIONS IN THE TWO AMERICAS

1. **The Bermudas.**—"The remote Bermudas" are a group of 360 small coral islands (of which twenty are inhabited), which lie 580 miles east of North Carolina. They are the chief British naval station of the North Atlantic. They are celebrated for their fine climate and lovely scenery. They export **onions** and **potatoes**.

(i) The chief town is **Hamilton**. They grow a very fine arrow-root. The houses are built of coral blocks, which are quite soft when cut, but harden when exposed to the air. A single frost would crumble them all up.

(ii) The islands are a winter resort of the Americans. "They are composed of blown coral sand; and they are surrounded by a living, growing reef of coral. The whole thus form a kind of modified atoll; and they are the most northerly of these coral structures."

(iii) The climate is mild and healthy. There are no streams or wells, and the people depend on rain water stored in tanks. Vegetation is prolific, and the Bermuda "cedar" was once much in request for shipbuilding.

(iv) Most of the exports (early potatoes, onions, tomatoes, etc.) go to the United States.

(v) The thermometer does not fall below 40°, nor rise above 85°.

(vi) "In these 'Fortunate Islands' of the Western Atlantic the trees never lose their verdure, the birds sing throughout the year, there are absolutely no venomous reptiles, all descriptions of tropical fruit abound, and the Indian corn harvest of June is followed by another in December. Forming an irregular oval ring, about 20 miles in length and ten in width, the group consists of at least 300 islets, coral reefs, and submarine sandhills. Of the 100 of these which may perhaps be called islands, only twenty are inhabited."

2. **British Honduras.**—Honduras is a Crown Colony on the Caribbean Sea, south of Yucatan. It is about one-sixth larger than Yorkshire. The population is not quite 40,000. The chief exports are **mahogany**, **logwood**, and **fruits**. The capital is **Belize** (9).

(i) "The country consists chiefly of primeval forest, with savannahs and so-called 'pine ridges,' which are open sandy plains covered with a wiry grass and dotted with pine-trees, affording fair runs for cattle. The ground is level and swampy along the coast-line and generally flat for about ten to twenty miles inland; after which hills from 500 ft. to 4000 ft. high succeed each other to the western boundary."

(ii) "The great staple of British Honduras is its mahogany, which abounds near the banks of the great rivers; large tracts covered with this timber, north of the Belize River, still remain untouched by the woodman; and these regions are believed to contain the finest mahogany."

"The vast size and magnificent foliage of this noble tree well entitle it to be called the 'king of the forest.' Very slow in growth, it hardly undergoes a perceptible increase in the lifetime of a man—hence its extreme hardness. It has been calculated that it requires 300 years to attain to a proper growth for cutting. So large does it become, that the lower section of a tree, 17 feet long, has been known to 'square' five feet six inches, equal to 550 cubic feet, and to a weight of 17 tons."

**3. The West Indies.**—The large and beautiful archipelago of islands which lies between the two Americas is called the **West Indies**. The islands extend in a vast curve between Cape Sable (in Florida) and the delta of the Orinoco. They occupy the same position with regard to the New World that the Eastern Archipelago occupies to



the Old World. Both archipelagoes lie in warm and sunlit seas; each has a large number of splendid harbours; each has many deep and navigable passages between the islands; and both are rich and fertile in the extreme.

(i) The West India Islands have been compared to "stepping-stones from Florida to the Orinoco." They are in sight from each other almost all the way.—They have also been compared to the pillars of a fallen bridge, standing alone in the middle of the ocean.—They are really the summits of mighty mountain-ranges which are partly under the sea, and which run parallel to the great ranges of North America.

(ii) The West India Islands keep out the tidal wave of the Atlantic, and thus make the Caribbean Sea and the Gulf of Mexico nearly tideless.

**4. Area and Divisions.**—The total area of the West Indies has been estimated at 95,000 square miles—or a little larger than the

whole of Great Britain. They are usually divided into the **Greater Antilles** ; the **Lesser Antilles** ; and the **Bahamas**.

(i) The **Greater Antilles** are Cuba, Hayti, Jamaica, and Porto Rico.

(ii) The **Lesser Antilles** are again divided into

(a) The **Leeward Isles**—from the Virgin Islands down to Dominica ;

(b) The **Windward Isles**—from Martinique to Trinidad ;

(c) The **Venezuelan Islands**—along the coast of South America. These islands are also sometimes spoken of as the **Leeward Islands**, because they are "to the lee" of the prevailing North-East Trade-winds.

(iii) The **Bahamas** are a group of low flat coral islands, surrounded by dangerous coral reefs and banks.

5. **Character**.—All are mountainous, with the exception of the eastern chain of the Lesser Antilles and the Bahamas. The mountain-ranges and peaks are in general forest-clad ; and there are several volcanoes in the Lesser Antilles.

6. **Climate**.—All the West India Islands, with the exception of the Bahamas, lie in the Torrid Zone. But the intense heat is modified by the sea-breezes and the Trade Winds. There are, speaking broadly, only two seasons—the **dry** and the **rainy**. The latter lasts from May to November.

(i) The West Indies (including the Bahamas) lie between 10° and 28° North lat.

(ii) Hurricanes, called (from the circular form in which they blow) **Cyclones**, are the chief drawbacks to an otherwise very fine climate. Houses have been lifted up bodily ; 24-pound guns flung headlong into the sea ; and even strong forts demolished.

7. **Vegetation**.—All the vegetable productions of the Tropics flourish here. In most of the West India Islands grow sugar and coffee of excellent quality ; and also the cotton-tree, the cacao plant (from which cocoa and chocolate are made), and tobacco. The islands are also rich in fruits—such as the guava, pine-apple, pomegranate, orange, lemon, and bread-fruit. The chief wealth of the Bahamas consists in timber—especially mahogany.

(i) Spices are also largely grown, such as pimento (or all-spice), ginger, pepper, etc.

(ii) The plantain, banana, yam, and bread-fruit tree furnish the inhabitants with a large part of their food.

8. **Animals**.—There are very few wild animals in the West Indies. The agouti is the largest native mammal. There are also bats, and a few rodents. Among birds, there are humming-birds, parrots, gorgeously coloured trogons, and chatterers.

(i) The animals found in South and Central America are almost entirely absent. There are no monkeys, no jaguars, pumas, tiger-cats, foxes, or edentata (such as sloths, ant-eaters, etc.).

(ii) There are large numbers and many varieties of lizards.—The vampire-bat is dangerous to animals and even to man : it sucks their blood when they are asleep.

**9. Trade.**—The chief exports are the products of the sugar-cane, tobacco, coffee, cocoa, cotton, timber, fruit, and spices.

The sugar-cane produces sugar, rum, and molasses.

**10. People.**—The population is very small, compared with the extent of the land and the richness of the soil. There are only about 4,000,000 inhabitants in all the islands. They are mostly Negroes or the descendants of Spanish settlers. The inhabitants of the British West Indies number about  $1\frac{3}{4}$  millions.

(i) About 56 per cent. of the people are Negroes ; 27 per cent. half-castes, mulattoes, etc.; and 17 per cent. whites. The whites (or "creoles") are most numerous in Cuba.

(ii) Most of the people are Roman Catholics—except in the British West Indies ; but many of the Negroes still practise heather rites.

**11. The British West Indies.**—Our possessions in the West Indies comprise six groups of islands. These are : **The Bahamas ; Barbados ; Jamaica with Turks Islands ; the Leeward Islands ; Trinidad with Tobago ; and the Windward Islands.**

**12. The Bahamas** are a group of many islands and rocks off the south-east coast of Florida. The extent of the whole of them is less than that of Yorkshire. The most important of the islands are **New Providence** (which contains the capital **Nassau**), **Great Bahama**, **St. Salvador** (the first piece of American land sighted by Columbus), and **Long Island**. The chief occupation is fishing for **sponges** and **pearls** ; and there is a growing export of fruit, such as **pine-apples** and **pears**.

The **Bahamas** consist of about 20 inhabited islands, and several thousand rocks. They are of coral formation. The trade in sponges is large ; coral, green turtles, and salt are also exported.—**Nassau**, the capital, is a great resort for invalids.—"Bahamas hemp," or **sisal** (an aloe-fibre), is a promising and growing industry.

**13. Barbados** is an island which lies by itself east of the Windward Islands. It is a little larger than Rutlandshire ; and the population is about 170,000. The capital is **Bridgetown** (16). The island is the headquarters for British troops in the West Indies. The staple produce is **sugar**. There is a railway across the island.

14. **Jamaica** is the largest of the British islands in the West Indies. It is more than two-thirds the size of Yorkshire ; but the population is only about 830,000, of whom 15,000 are whites. The capital is **Kingston** (57) ; the ancient capital, **Spanish Town** (6). The total of acres cultivated in the island is 900,000 ; and fruit-culture is bringing fresh land into cultivation each year. **Sugar, coffee, and fruit** are the staple products ; and there is also an attempt at growing **cinchona**.—**Turks Islands** are really part of the Bahamas ; but they are under the government of Jamaica. Their only important industry is **salt-raking** ; but there is also a small fishery for **sponges**.

(i) **Jamaica** is next in size to **Cuba** and **Hayti**. (The word means the "Island of Springs.") The north coast is very beautiful : "bold bluffs, charming inlets, rushing and roaring rivers of clearest water, green lawns as soft as velvet, dark groves, songsters and butterflies, all come together to make this coast a veritable Garden of Eden." There is scenery in Jamaica which almost equals that of Switzerland and the Tyrol—the Blue Mountains are especially fine. Among the mountains there is a healthy climate. There are about 200 rivers, all teeming with fish and alligators. But **Black River** is the only one navigable.

(ii) "The frangipani, so much used in perfumery, grows wild all over the east side of the island. Innumerable varieties of ferns grow in the mountains, and orchids abound in the woods. The cactus tribe is well represented, and the sensitive plant grows in pastures. Trade in pine-apples is daily attaining to a higher importance, and the culture of this fruit is an exceedingly profitable industry, even outgrowing the exports of sugar and of the rum for which Jamaica is so famous."

15. **The Leeward Islands** in our possession comprise a number of small islands, the largest of which are **Dominica** and **Antigua** ; and the most populous of which are **St. Kitts** and **Anguilla**. The population of none of them is equal to that of a fifth-rate English town ; **St. Kitts** has only 43,000 inhabitants. **Sugar and molasses and lime-juice** are the staple products ; and some of the islands are taking zealously to fruit-growing. **Phosphate of lime** is exported from two of the islands.

16. **Trinidad** is a large square-shaped island off the mouths of the Orinoco. It is a little larger than Hampshire. **Tobago** (a small island less than Rutlandshire) is included within its government. Three-fifths of Trinidad is under cultivation ; and the exports are **sugar, cacao, and asphalt**. There are railways, telegraphs, and good roads. **Tobago** grows **cotton and tobacco**.

(i) "On the mainland," wrote Anthony Trollope, "that is, the land of the main island, the coast is precipitous, but clothed to the very top with the thickest and most

magnificent foliage. With an opera-glass one can distinctly see the trees coming forth from the sides of the rocks as though no soil were necessary for them, and not even a shelf of stone needed for their support. And these are not shrubs but forest trees, with grand spreading branches, huge trunks, and brilliant-coloured foliage."

(ii) **Trinidad**, the largest of the Windward Islands, very close to South America, is famous for a Lake of Pitch or Asphalt, from which immense quantities are annually taken. There is, however, no perceptible diminution; as new supplies continually rise from below. "The very ship anchors in pitch; the passengers disembark on a pitch wharf; pitch lies heaped up everywhere; in whatever direction the eyes are turned they light on nothing but pitch; pitch, and the current market price of pitch, are the one burden of conversation." The lake is so solid that people can walk on it; and yet it is in a state of perpetual "boil."

(iii) The chief port of entry and capital of Trinidad is **Port of Spain** (60). Thirty-eight steamers from Europe touch at it every month, and six from the United States and Canada. The town is also a trade-depôt for Venezuela.

**17. The Windward Islands** in our possession consist of **Grenada** (with the "Grenadines"), **St. Vincent** and **St. Lucia**. The official capital is **St. George's, Grenada**. Grenada grows cacao, cotton, and spices; but the cultivation of sugar is decreasing. St. Vincent (which was devastated by a volcano in 1902) grows sugar, rum, cocoa, spices, and arrowroot. The splendid harbour of **Castries** in St. Lucia is the chief coaling-station for the West Indies; and it is for this reason strongly fortified. St. Lucia produces sugar, cocoa, spices, and logwood.

**18. The Trade of the West Indies.**—The trade of our islands in the West Indies amounts to about £12,000,000 per annum; the imports and the exports nearly balancing each other. **Trinidad** is the island that does the largest trade; next to it comes **Jamaica**; and next to Jamaica comes **Barbados**. The smaller islands follow at a very great distance. Though the abolition of slavery was a great blow to the principal industry of sugar-planting, yet the West Indies' trade is now recovering, thanks to a large export of fruit.

(i) The imports from Great Britain consist principally of cottons and woollens, apparel, metal manufactures, machinery, and manure.

(ii) The exports received by Great Britain are sugar and rum and molasses, cocoa, spices, arrowroot, fruit (principally bananas and pine-apples); logwood; asphalt, etc.

**19. British Guiana.**—This colony, which lies in the north of South America, includes the districts of Demerara, Essequibo, and Berbice, which are named after the three chief rivers of the country.



The whole country contains 109,000 square miles—that is, more than twice as much as England (without Wales). The population amounted in 1912 to over 300,000, of whom about one-third were immigrant Indian plantation-coolies, and about 5000 Europeans. The chief exports are **sugar** and its by-products, rum and molasses (which form about 80 per cent. of the export trade), and **gold**; the chief imports are **rice** and **flour**. About half of the total trade is done with Great Britain. The capital and chief port is **Georgetown** (48), on the Demerara. **New Amsterdam** is a small town on the Berbice.

(i) **Build.**—Along the coast runs a strip of low-lying **alluvial land**, once an unhealthy and useless swamp; behind this stretches a rocky, **hilly country**, covered with a dense primeval forest, which in the far interior is broken by **open savannahs**. The coast-strip is very like Holland, being below the level of the sea; but the Dutch, the original possessors of the colony, by making dams, dykes, and canals, turned the swamp into rich sugar plantations. This alluvial land is practically the only cultivated and inhabited portion of the colony. The gold is found in the hilly interior.

(ii) "The **climate**, from the position of the colony (1° to 9° N.) is naturally **hot**; owing to the heavy rainfall, which sometimes amounts to 140 inches in a year, it is **moist**, and, in the forest, **steamy**. On the coast, however, there are always sea-breezes to moderate the temperature, and the heat is never unpleasant."

(iii) In 1899 a long-standing boundary dispute between British Guiana and Venezuela was settled by arbitration. Venezuela had claimed all the colony as far east as the River Essequibo. The arbitrators, however, settled that the boundary should start at Point Playa on the coast, and run in a crooked line as far as Mount Roraima in the south-west. The Venezuelans claimed 60,000 square miles and got 200.

**20. The Falkland Islands.**—This group lies 480 miles north-east of Cape Horn, and is of some importance as a refitting and provisioning station for ships after the stormy passage round Cape Horn. The surface is rugged and hilly, and the climate is raw, though not very cold. Sheep-farming is the only important industry, and wool and frozen mutton the only exports. **Stanley** is the capital.

(i) "The scenery of Stanley," says a visitor to the island in 1896, "is the scenery of all the Falklands: grass, rocks, peat, and the sea; no trees, nor even shrubs; only open hillside, with lines of rock stretching across it; monotonous and generally depressing. The climate is suited to the scenery. Almost incessant wind brings up rain, hail, sleet, snow sometimes, even in summer, from the ice-floes of the South Pole. There are no roads, except the streets of Stanley. All land communication is by riding, following the devious tracks which have been discovered through the rocks and peat-bogs of the 'camp,' as the country is called."

(ii) **South Georgia**, 800 miles to the E.S.E., is a dependency of the colony. It has no permanent inhabitants, and is generally ice-bound.

Part IV.

BRITISH AUSTRALASIA

VICTORIA

NEW SOUTH WALES

SOUTH AUSTRALIA

QUEENSLAND

WEST AUSTRALIA

TASMANIA

NEW ZEALAND

POLYNESIA

Methinks I see Australian landscapes still,  
But softer beauty sits on every hill ;—  
I see bright meadows decked in livelier green,  
The yellow cornfield, and the blossomed bean ;  
A hundred flocks o'er smiling pastures roam,  
And hark ! the music of the harvest home.  
Methinks I hear the hammer's busy sound,  
And cheerful hum of human voices round,—  
The laughter, and the song that lightens toil,  
Sung in the language of my native isle ;  
In mighty bays unnumbered navies ride,  
Or come and go upon the distant tide.

T. K. HERVEY.

Here lifts New Zealand, mid a sea of storms,  
Her hills that threaten heaven like Titan forms,—  
Where the long lizard on the herbage lies,  
And clouds of emerald beauty paint the skies ;  
Where the dark savage courts the burning noon,  
And counts his epochs by the hundredth moon !

T. K. HERVEY.

## OCEANIA

**OCEANIA** is the name usually given to the countless groups of islands in the Pacific Ocean—including Australia. It is generally divided into three sections : **Australasia**, in the Southern Hemisphere ; **Malaysia**, or the East Indian Archipelago, in the west ; and **Polynesia**, in the north and east of the Pacific. By far the largest part of Oceania belongs to the British Empire.

(i) The name **Australasia** is now generally restricted to Australia, New Zealand, and the neighbouring islands.

(ii) The islands of **Malaysia** are really continental islands—parts of Asia and of Australia.

(iii) **Polynesia** includes **Melanesia**, **Micronesia**, etc.—all of which consist of true oceanic islands. But the term *Polynesia* is often restricted to those islands which lie in the east of the Pacific.

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## A U S T R A L I A

1. **Introductory.**—**Australia**—a continent which lies entirely within the Southern Hemisphere—is in some respects the most remarkable continent in the world. It is the antipodes of Europe ; and it is antipodean in character as well as in position. It is the smallest continent on the edge of the largest ocean. Though nearly as large as Europe, it has only one river of any size or importance ; and that river does not reach the sea, and sometimes does not flow at all. It is full of other oddities : mammals which lay eggs ; worms six feet long ; spiders which whistle ; crayfish which in the dry season make themselves underground tanks ; quadrupeds running on two feet. When the first European settlers visited the country, they found no grain to eat, no domestic animal to give milk or to draw burdens, and not the smallest trace in the continent of what is called civilisation.

The name **Australia** means “ Land of the South,” from the Latin *Auster*, the South wind.

2. **Australia and Africa : a Comparison.**—These two continents possess several striking features in common :—

- (i) Both are compact in shape, simple in outline, and without limbs or peninsulas.
- (ii) Both have their highest ranges of mountains on the eastern edge; and the highest peaks in the south-east.
- (iii) Both have extensive deserts in the interior; with oases in these deserts.
- (iv) In both, the volume of water in their longest rivers—the Nile and the Murray—diminishes as they approach the sea.
- (v) The east coasts of both are protected—the one by the Great Barrier Reef, the other by the island of Madagascar.
- (vi) Both have a strong current setting south on their east coasts.
- (vii) Both possess enormous breadths of land which can produce nothing without the aid of irrigation.



3. **Position and Boundaries.**—Australia lies to the south-east of Asia, and between  $10^{\circ}$  and  $39^{\circ}$  South lat. It is bounded—

- 1. N.—By Torres Strait and the Arafura Sea.
- 2. E.—By the Pacific Ocean.
- 3. S.—By the Southern Ocean.
- 4. W.—By the Indian Ocean.

- (i) The shortest line from Australia to England is 11,000 miles long.
- (ii) Cape Leeuwin is the first Australian land sighted on the voyage from England.

**4. Size and Shape.**—Australia contains an area of nearly 3,000,000 square miles (with Tasmania); and it is thus about one-fourth smaller than Europe. Its shape is very simple: it is that of an irregular parallelogram.

The exact area is 2,972,906 square miles; but this does not include Tasmania, which has 26,215 square miles—very nearly the size of Scotland without its islands.

**5. Coast Line.**—The coast line of Australia is, like that of Africa, very simple and regular—with a contour wonderfully devoid of inlets. One long peninsula and one broad and deeply-entering gulf are the solitary features that strike us when we look at the map. Opposite the **Gulf of Carpentaria** in the north stands the fiord-like **Spencer Gulf** in the south; while **York Peninsula** is balanced by the island of **Tasmania**, which was once a part of the mainland. The rest of the coast consists of long stretches of an uniform character, indented, however, by many minor inlets. The **Great Australian Bight**, in the south, is only a shallow curve in the land, and is of no value for shipping.

(i) **Capes.**—The chief capes are: **Cape York**, the most northerly point of York Peninsula and of the whole continent; **Cape Byron**, the most easterly point; **Cape Howe**, in the south-east; **Wilson Promontory**, the point farthest south; **Cape Leeuwin** (= "Lioness"), in the south-west; **Steep Point**, the most westerly cape; and **Cape North-West**.

(ii) **Bays.**—The chief openings are: The **Gulf of Carpentaria**, on the north; **Van Diemen Gulf** and **Cambridge Gulf**, on the north-west; **Shark Bay**, and **Geographe Bay**, on the west; the **Great Australian Bight**, **Spencer Gulf**, **St. Vincent Gulf**, and **Encounter Bay**, on the south; **Halifax**, **Hervey**, and **Moreton Bays**, on the east.

(iii) **Straits.**—The principal straits are: **Torres Strait**, between Australia and New Guinea; **Bass Strait**, between Australia and Tasmania.

(iv) **Islands.**—The largest islands are: **Groote Eylandt** (= "Great Island") and **Welliesley Island**, in the Gulf of Carpentaria; **Melville Island**, which closes in Van Diemen Gulf; **Dampier Archipelago** and **Dirk Hartog Island**, in the west; **Kangaroo Island**, **King Island**, and **Tasmania**, on the south; and **Great Sandy Island**, on the east.

(v) **The Great Barrier Reef**, which lies off the coast of Queensland, is one of the most remarkable phenomena in the world. It is composed of a series of coral reefs which stretch for a distance of 1200 miles, from near Hervey Bay to Torres Strait, which it nearly closes. The reef is about 100 miles wide in the south, and grows narrower as it goes north. The channel between it and the shore is from 20 to 70 miles wide; and, being defended from the swell of the Pacific, is always calm. The Barrier is not



continuous, but is broken by several deep channels—the largest opposite the mouth of the Burdekin river. This is the only safe opening for ships. Fresh water is hostile to the formation of coral, and hence these openings occur opposite the mouths of rivers. The sea in which the Barrier Reef lies is called the **Coral Sea**. The Barrier Reef marks the line of a coast which existed ages ago; and it proves that Australia was at one time much larger than it is in the present day. The whole continent seems to have sunk.

“The long ocean swell, suddenly impeded by this barrier, lifts itself in one great continuous ridge of deep blue water, which, curling over, falls on the edge of the reef in an unbroken cataract of dazzling white foam. Each line of breakers runs often one or two miles in length with not a perceptible gap in its continuity. The unbroken roar of the surf, with its regular pulsation of thunder, as each succeeding swell falls first on the outer edge of the reef, is almost deafening, yet so deep-toned as not to interfere with the slightest nearer and sharper sound.”—JUKES.

**6. Build.**—About three-fourths of the interior of Australia is filled by a low plateau, which rises gradually from south to north, and from west to east. This interior low plateau or plain is a “vast concave table of sandstone,” with an area of about  $1\frac{1}{2}$  million square miles—



AUSTRALIA

or more than half that of the continent. The central depression is filled by **Lake Amadeus**. The edges of the plateau are in many parts bordered by terraced ramparts of mountains. Between these mountain-ranges and the sea runs a low plain which varies very much in breadth. About one-sixth of the continent is filled by the fertile basin of the Murray and

its tributaries—a basin which has the highest mountains in Australia on its eastern and south-eastern borders. A narrow continuous plain round the whole coast of the continent, one great interior river-basin, and one vast low plateau—mostly desert,—these are the chief component parts of Australia.

(i) The landscape on the eastern sea-board has been thus described: “The hilly and the river-lands consist of grassy park-like uplands, clothed with scattered thin forests of magnificent trees, for the most part evergreen and vertical-leaved, diversified by bush and heath and scrub; all of excellent pasture, intersected by wide valleys of remarkable fertility well adapted for agriculture.”

(ii) On the south coast, from King George’s Sound to Spencer Gulf, there is neither a mountain nor a river to be seen.

7. **Mountains.**—The mountains of any elevation are all found on the east side of Australia. The most important mountain-range runs, with few breaks, between **Wilson's Promontory** on the south and **Cape York** on the north. It begins a little to the west of Melbourne, runs east, and then due north, until it ends in the York Peninsula. It goes under the generic name of **The Dividing Range**, because it divides the exterior plain on the coast from the immensely broad basin of the Murray. In the south-east, this range forms an almost continuous cordillera; in the north, it is often rather the steep outer edge of the table-land. The whole range becomes lower as it goes north. The highest part is the **Warragong Mountains** or **Australian Alps**, in New South Wales and Victoria; and the continent reaches its highest elevation in the **Kosciusko Group** (in New South Wales), the loftiest peak in which is **Mount Townsend**, 7350 ft. high,—or almost exactly half the height of Mont Blanc.—These Eastern Highlands run parallel with the coast for a distance of about 1700 miles.

(i) Although the name **Dividing Range** is frequently used of the whole cordillera in the south-east and east, the different ranges, some of which are separated from each other by deep depressions, are known by various names. These are, in their order: **The Grampians**; the **Great Dividing Range** (north of Melbourne); the **Australian Alps**; the **Blue Mountains**; the **Liverpool Range**; the **New England Range**; **Darling Downs**; etc. etc. Of these, the Australian Alps is the most distinctly marked range, and contains the highest summits.

(ii) The Australian Mountains are much older than most of the mountain-ranges in Europe. Hence they have been much more worn down by weathering, and do not present those sharp shapes and peaks which are called *horns*, *needles*, and *teeth*, in the Alps of Europe. These forms have, in Australia, been worn away to blunted shapes, table-lands, etc.; and, in this respect, they resemble the Scandinavian Mountains.

(iii) There are no active volcanoes in Australia; but there are many craters only recently extinct; and much of the fertile soil is of volcanic origin.

(iv) Much of the alpine vegetation of the higher mountains in New South Wales and Victoria is analogous to that of Europe.

8. **Plains.**—The **Lowland Plains** consist chiefly of the fertile basin of the Murray, which fills an area of about half a million square miles—or more than twice that of the Austrian Empire—and much of which consists of a deep black soil of the richest description. The **Upland Plains**, which have an average elevation of about 500 ft., are mostly desert, and the arable land in them is found in isolated oases.

(i) In the west, between 20° South lat. and the Tropic of Capricorn, lies the **Great Sandy Desert**; and, a little north of 30° South lat., the **Great Victoria Desert**.

(ii) The larger part of the interior of Australia consists of "the most forbidding and desolate regions on the face of the globe." Flat plains, with a sandy or clayey soil of a red colour, more or less charged with salt, and covered with "salt-bush" or with "scrub" with hard or prickly leaves, form the main feature of the interior. The scrub consists of a bushy eucalyptus which grows to the height of eight or ten feet; and which is often so dense as to be quite impenetrable. "Australia, in this respect more African than Africa itself, is essentially the land of wastes and steppes."

**9. Rivers.**—The rivers of Australia are few and small compared with the size of the continent; and they are subject to two serious and opposite disadvantages—they are swollen to overflowing, or dried up so as to be unnavigable; they are in a state either of drought or of flood. The only river in the continent that can be compared for size with those of the Old and New Worlds is the **Murray**; and even this belongs to a basin of inland drainage. It is 2345 miles long, from its mouth to the source of the **Darling**, its longest tributary; and much of it is a highway of trade for the colony.

(i) The **Murray**, like the Amazon, draws its waters from the most opposite quarters—from the neighbourhood of the Tropic of Capricorn, and from about 38° South lat. Its whole arterial system drains an area of about half a million square miles—an area twice as large as that of the whole Austrian Empire. Its chief tributaries are the **Murrumbidgee** (a N.S.W. river), the **Lachlan**, and the **Darling** (N.S.W.—Queensland). Sometimes the Murray is only a series of straggling water-holes with or without a connecting thread of stream; at other times it is a raging torrent. Like the Amazon, again, it has numerous side-channels, lakes, and lagoons along its course.—The Darling sometimes entirely ceases to flow, and becomes a mere chain of pools. The rainfall soaks through the porous soil and goes into underground reservoirs. "In ages now long past the Murray, instead of being a sickly dried-up stream, was a kind of southern Nile, bearing upon its wide waters the same annual gift of fertilising mud; and hence on its banks there are now stored up the elements of an inexhaustible fertility."

(ii) Of the rivers which flow to the east, the two most important are the **Fitzroy** and **Burdekin** in Queensland. The others to the east of the Eastern Highlands are short, and generally unfit for navigation. The chief are the **Brisbane** and the **Hunter**.

(iii) On the north coast, the largest rivers are the **Finders**, which falls into the Gulf of Carpentaria, and the **Victoria**, which falls into the Queen's Channel.

(iv) On the west coast, the best-known rivers are the **Ashburton** and the **Swan**.

**10. Lakes.**—To the north of Spencer Gulf lies the "Lake District" of Australia. This region, which has an area of about 10,000 square miles, is "set with lakes," the largest being **Lake Eyre**. **Lake Torrens** lies to the south of it, and **Lake Gairdner** (an immense salt lake) to

the west. Far to the north-west lies **Lake Amadeus**, which often dries up into a plain of saline mud. **Lake Alexandrina** is a large fresh-water lake into which the Murray flows. The depth of the lakes varies very greatly with the dryness or the rainy character of the season.

(i) These "dead masses of salt water" are hardly what are called lakes in other parts of the world. Sometimes they are sheets of shallow water; sometimes saline marshes; sometimes grassy plains or plains of saline mud.

(ii) The remarkable changes and caprices of Australian drought and flood are well illustrated by the alteration that takes place in **Lake George** (the largest *fresh-water* lake in Australia), a lake south of Goulburn, in New South Wales. In 1824, it was 20 miles long and 8 miles wide. In 1837, it was a grassy plain. In 1865, its bed was again filled with water, 17 ft. deep.

**11. Climate.**—Dry heat is the characteristic of the climate of Australia; and this is found all over the continent. Within the tropics, summer (November to April) is the rainy season; outside the tropics, the rainy season is in winter (May to October). Sudden variations in temperature are another characteristic of the Australian climate, the thermometer sometimes falling  $60^{\circ}$  to  $70^{\circ}$  in a few hours. Hot winds from the interior, like the blast from a furnace, generally laden with fine dust, and called "brick-fielders," sometimes raise the temperature to  $115^{\circ}$ .

(i) The misfortune of Australia, as regards the supply of rain, is that the mountain-ranges which act as condensers, lie so near the coast. In South America, they are placed as far back as they can be, and the continent benefits by *all* the rain that can be squeezed out of the North-East and the South-East Trades; in Australia, the mountain-ranges are quite near the east coast. The result is that the narrow plain on the coast gets more rain than it needs; and when the rain-bearing winds have crossed the mountains and table-lands into the interior, the great heat there dissipates the clouds, and does not permit them to condense into rain.

(ii) Captain Sturt, in the desert interior, found the thermometer rise to  $127^{\circ}$ ; and the mercury then burst the tube. For three months it was  $101^{\circ}$  in the shade. "Every screw came out of the boxes; the horn handles of instruments and the combs split up into fine laminæ; the lead dropped out of the pencils; the hair stopped growing; and the finger-nails became brittle as glass."

(iii) Rain sometimes falls in terrible floods; and this heavy rain is alternated with long periods of complete drought. The Hawkesbury river once rose 93 ft. above its ordinary level; and hundreds of persons only escaped by climbing high trees. - In 1884 there was no rain; and 10,000,000 of sheep died of thirst. From time to time, there is no rain for periods of two or three years; every blade of grass dies; and the rivers shrink into straggling water-holes.—Within the tropics, the rainy season is in summer (from November to April); outside the tropics, the rainy season is almost always in winter. The amount of rain-fall on the east side of Australia is in *inverse*

proportion to the distance of the place from the sea-shore. **Sydney** has 50 inches of rain a year; **Bathurst**, which is 96 miles from the coast, has only 23 inches. But then Bathurst lies on the western slope of the Blue Mountains, which serve as a condenser for the rains from the sea. Besides, the heat of the inside plains dissipates the moisture and prevents it falling as rain.

(iv) It is the general scarcity of rain in the interior which has produced the necessity for artesian-well irrigation, now so largely and so successfully employed.

**12. Vegetation.**—The flora of Australia is quite unique—altogether different from that of other parts of the globe. It is very rich in species, which number about 10,000—many more than are to be found in all Europe. The most characteristic trees are the **eucalypti** and **acacias**; and the vegetable feature peculiar to Australia is “**scrub**.” No grains, fruits, or edible roots are native to Australia; but those imported by the colonists—the **vine**, **fig**, **orange**, **peach**, etc., and grains such as **wheat** and **maize**—flourish and produce in a manner that far surpasses European fruits and grains.

(i) “The vegetation is noticeable for the large number of distinct species it contains, and for their dissimilarity from the species of other countries. There exist about 10,000 species of flowering plants in Australia, being more than is contained in the whole of Europe. Many of these plants are capable of resisting great extremes of heat and cold. Some of the noble eucalyptus trees, with their peculiar vertical evergreen leaves, reach to the height of 120 feet, with a girth of from 12 to 20 feet. The highest tree in the world, 480 feet, was discovered in Australia, and several trees are now to be seen over 420 feet high. There are about 300 different species of acacias or wattles, with fragrant blossoms.”

(ii) The **eucalyptus** or gum-tree is a prominent feature in the Australian landscape. It often attains a height of more than 250 ft., with a girth of about 20 ft. One fallen tree was discovered of the length of 480 ft. (much higher than St. Paul's); and this was probably the grandest tree in the world. The different species—red gum, blue gum, stringy bark, iron bark, etc.—are greatly valued for their timber. Their leaves are thick and leathery; and, by a twist in the stalk, the edge of the leaf is vertical instead of being parallel to the ground. They shed—not their leaves—but their bark. There are also large-leaved fig-trees that rival the gum-trees in height. “In the Dandenong Range, about forty miles east of Melbourne, the ravines contain numerous trees over 420 feet high, and one fallen tree was discovered of the enormous length of 480 feet—undoubtedly the grandest tree in the world. The numerous species of *Eucalyptus*, known as red gum, blue gum, stringy-bark, iron-bark, box, peppermint, and many others, produce valuable timber, each having special qualities adapting it for certain uses.”

(iii) The grass-trees form another peculiar feature in the landscape. From their rugged stems springs a tuft of drooping wiry foliage, from the centre of which rises a spike. When it flowers in winter, this spike becomes covered with white stars; and a heath covered with grass-trees has the most singular and beautiful appearance.



"The Australian bush is fragrant all the year. The traveller in the highlands, especially of New South Wales, will not unfrequently light, in some sheltered valley or deep ravine, on a scene of the most luxuriant vegetation, such as that of Illawarra, 50 miles to the south of Sydney, where palms rising to 70 or even 100 ft., Indian figs draped with strange parasites, creepers, ferns, stag-ferns, flame-trees, vines, and the loftiest trees, are all intermingled into a labyrinth of the most graceful forms and brilliant colours."

(iv) The acacias, or "wattles," abound everywhere in the country, and are covered with yellow blossoms which are generally fragrant. There are more than 300 species.

(v) The Australian bush is fragrant all the year. The "Mallee scrub" is a low eucalyptus, which grows so close that it is often quite impenetrable. "The surface of the country seems like a heaving ocean of dark waves, out of which, here and there, a tree starts up above the brushwood, making a mournful and lonely landmark." "Just as Tartary is characterised by its steppes, America by its prairies, and Africa by its deserts, so Australia has one feature peculiar to itself, and that is its 'scrubs.'"

(vi) One of the most striking plants of Australia is the "flame-tree." When it is covered with its large bunches of red flowers, "it renders the Illawarra mountains (50 miles south of Sydney) conspicuous for miles out at sea." "Still more remarkable is the rock-lily, a giant among its allies; for it sends up a flower-stalk 30 feet high, bearing at its summit a crown of lily-like flowers several feet in circumference."

(vii) The imported "Scotch thistle" has multiplied so rapidly as to become a serious nuisance; and the different governments have to spend large sums in the endeavour to exterminate it.

(viii) "Immense tracts are covered with the jarrah, sometimes called mahogany, an almost indestructible timber, which is free from the attacks of teredo and termites, and is valuable for shipbuilding and for all engineering works."

**13. Animal Life (i).**—The fauna of Australia is even odder and more peculiar than its flora. The mammalia of other continents are completely absent; and the tiger, elephant, and rhinoceros of Java and Sumatra are wholly wanting. The characteristic animals are **marsupials** or pouch-bearing mammalia. The largest marsupial is the **kangaroo**. Among the carnivora, the most formidable is the native dog or **dingo**. The oddest animal is the **platypus** or duck-bill. Like the plants of Australia, the native animals are of no service to man; but the imported animals,—horses, sheep, and oxen,—grow, increase, and exist in almost countless numbers.—The birds excel those of other temperate lands in beauty of plumage and elegance of form; and there are more species than in Europe. Birds (of surpassing brilliancy of plumage) that feed on flowers are very numerous. Large birds of the ostrich type, such as the **emu** and **cassowary**, are very characteristic of Australia.—The continent is also rich in insects, which are both beautiful and peculiar,—Most of the snakes are poisonous.



(i) The smaller species of marsupials are the **wallaby**, the **cat-kangaroo**, and the **hare-kangaroo**. The **flying-mouse**, a kind of small flying opossum, is "able to sleep in a good-sized pill-box." The **koala** creeps slowly about at night on trees in search of fruit and seeds.

(a) "There are in Australia no apes, no oxen, antelopes or deer; no elephants, rhinoceroses, or pigs, no cats, wolves, or bears; none even of the smaller civets or weasels; no hedgehogs or shrews, no hares, squirrels, porcupine, or dormice; only some peculiar species of rats and mice, and the dingo or wild dog."

(b) "The kangaroo attains a height of 5 feet, and a weight of 200 lbs. The wombat, the largest marsupial after the kangaroo, is 3 feet long, feeds on grass and roots, burrows deep in the ground, and comes out only in the night ('is nocturnal in its habits')."

(ii) The **platypus** (or **ornithorhynchus**), duck-bill or duck-mole, is a mammal about 20 inches long, with broad webbed feet, flat horny bill (not fastened to the skeleton) like the bill of a duck; is amphibious, and lays eggs.—The **echidna** or "porcupine ant-eater," is also a mammal which lays eggs.

"The ant-eater of Western Australia is of the same size as a squirrel. It has beautiful white stripes; a long bushy tail; and 52 teeth—a greater number than any other known quadruped possesses."

**14. Animal Life** (ii).—Of the imported animals, the rabbit and the sparrow have proved the most terrible and expensive nuisances. In New South Wales alone, 2000 men are permanently employed in trying to exterminate the rabbit, which desolates wide tracts of country by eating up the herbage. In Victoria, the damage done by the rabbit in ten years is estimated at £3,000,000.—The sparrow is also a great pest; and large sums have to be paid for the destruction of these birds and their eggs.

(i) "Among the temperate countries of the world, Australia stands unrivalled for the variety of form, the beauty of plumage, and the singularity of habits of its birds."

(ii) **Parrots** and **cockatoos** abound; and the **regent-bird**, the **rifle-bird**, the **fly-catcher**, and the **lyre-bird** are remarkable for beauty.—The **brush-birds** do not sit on their eggs, but bury them under heaps of earth and vegetable matter, to be hatched by the heat of the sun. The **bower-bird** builds a bower-like structure of twigs and branches, and decorates it with feathers, bones, and shells.

(iii) "The brush-turkeys or mound-makers have the curious reptilian character of never sitting on their eggs, which they bury under mounds of earth or refuse vegetable matter, allowing them to be hatched by the heat of the sun, or that produced by fermentation."

(iv) "The emu and the cassowary are the well-known Australian representatives of the ostrich tribe."

(a) The abundant flora on the one hand, the scarcity of fruit on the other, have combined to develop the habit of flower-feeding. Hence there are more flower-feeding birds in this isolated continent than in any other. The best known are the Honey-suckers and the Brush-tongued lories.

(b) In NEW SOUTH WALES 17,000 miles of rabbit-proof fencing have been erected, and the whole of the western frontier is protected in this way.

- (c) "An eminent naturalist has reckoned that there are 690 distinct species of birds in Australia, being more than the number found in Europe, and nearly as many as inhabit and visit North America. Among these the most characteristic are honey-suckers, lye-birds, cockatoos, brush-turkeys, emus, laughing jackasses, crested pigeons, and bower-birds."
- (d) "All the fruits of Europe are grown with success. The orange is cultivated most extensively, and as many as 10,000 oranges have been obtained from individual trees."

**15. Minerals.**—Australia is very rich in minerals. **Gold, copper, tin, iron, and coal** are found in large quantities in all the colonies; and a good deal of **silver** is also mined in New South Wales.

(i) **Gold** is the most important metal found in Australia; and **Victoria** is the colony that has produced most. In the last sixty years, about £300,000,000 worth has been mined. The total yield of Australia is over £400,000,000; but the supply has been rapidly decreasing for some time. **Gold** is also found in **New South Wales**, in **Queensland**, and recently in very large quantities in **Western Australia**.

(ii) The **coal-fields** of New South Wales are among the most extensive in the world; and they contain, besides ordinary coal, cannel coal, and mineral oils. The whole basin of the river Hunter and its tributaries, down to Newcastle at its mouth, abounds in good coal. Coal is also mined in Queensland, especially about the towns of Warwick, Maryborough, and Ipswich near Brisbane.

(iii) **South Australia** is the chief producer of **copper**.

(iv) **Tin-mines** of great value have been opened up in Queensland. (*N.B.* 'Stanthorpe'.)

(v) **Iron** is plentiful in most of the colonies. Only in New South Wales, however, does it occur near coal. There are both coal and iron fields at Mittagong and Berrima (N.S.W.).

(vi) Precious stones, such as the garnet, ruby, and sapphire, are found.

(vii) **Silver**, in mines "of apparently inexhaustible wealth," was discovered in 1884 at Silverton in the Barrier Ranges (N.S.W.).

**16. Inhabitants.**—Like its flora and its fauna, the human natives of Australia are isolated, peculiar, and unique. The Australian aborigines are said to belong to the **Austral-Negro** family. They are fast disappearing, and now number little over 30,000—which is only about one for every ten square miles. Of white inhabitants, there are now on the continent about 5,000,000—all speaking the English language, and almost all of British descent.

(i) The native **Australian** is of the average European height, has a very lean body—no calves (as is general with the dark races), nose broad and fleshy, complexion coffee-brown, much hair—curly but not woolly, and a long narrow head with low brow. He is one of the most degraded of savages—without house or domestic animals,

with no weaving, no pottery, and no religion. His language can count up to *five*—and no further. He lives on shell-fish, lizards, snakes, frogs, worms, insects, grubs, etc. He sometimes eats his own children. The chief occupation of the men is hunting and war; of the women, getting food and cooking it.

(ii) **Victoria**, the smallest of the Australian States, is much the most densely populated. The following are the number per square mile in each State:—

<b>Victoria</b>	14 persons per square mile.
<b>New South Wales</b>	5        „        „
<b>Queensland</b>	3        „        4 square miles.
<b>South Australia</b>	1 person per square mile.
<b>West Australia</b>	1        „        3 square miles.
<b>The Whole Continent</b>	1        „        square mile.

It should be noted that it is only the northern part of South Australia, near the sea-coast, that is peopled at all; and that West Australia is almost unexplored.

(iii) There is not in Australia the same tendency to crowd into large towns that exists in the older countries of Europe. The large cities of Australia are large, chiefly because they are great ports for exchanging the produce of the continent with the imports of Great Britain and other industrial countries. The following are the populations of the six largest cities, with the English town which they most nearly approach in population (1911 census).

<b>Melbourne</b> (larger than Birmingham)	591,000 inhabitants. <sup>1</sup>
<b>Sydney</b> (nearly = Manchester)	637,000        „
<b>Adelaide</b> (Cardiff)	192,000        „
<b>Brisbane</b> <sup>2</sup> (Brighton)	141,000        „
<b>Perth</b>	84,000        „
<b>Newcastle</b> (Barrow)	65,000        „

**17. Roads and Railways.**—Though Australia possesses some good roads, yet roads are not generally very good. Hence the importance of railways. They, as is natural, have been built chiefly in the better-settled south and east. The four capitals—Adelaide, Melbourne, Sydney, and Brisbane—are all joined by telegraph and rail; and from each of these towns lines radiate into the pastoral interior. In Western Australia lines branch north, south, and east from the capital—Perth. The great **Overland Telegraph-line** runs from Adelaide in the south, right across the Continent, to Port Darwin in the north (1883 miles); thence it communicates by submarine cable, with Java and Europe.

<sup>1</sup> This is about 40 per cent. of the whole population of Victoria.

<sup>2</sup> Within a radius of five miles from the centre of Brisbane.

(i) A railway follows the Overland Telegraph for a part of its course, as far as a place called Oodnadatta; but it is to continue right across the Continent.

(ii) Inland—in what are known as the “back-blocks”—the roads are often mere tracks through the bush. Yet good roads connect the commercial coast-towns and the principal railway-stations with the farming-centres of the interior.

(iii) Submarine Cables run from Sydney to Wellington in New Zealand, and from Melbourne to Tasmania. Sydney is also connected direct by the all-British Pacific cable with Vancouver in British Columbia. The route followed is from Vancouver *via* Fanning Island, the Fijis, to Norfolk Island. At Norfolk Island the cable bifurcates, one branch going to Sydney, and the other to Auckland in New Zealand.



DENSITY OF POPULATION. (See 16 (ii).)

18. **Irrigation.**—The most important question for agricultural and pastoral labour in Australia is the question of the supply of water. The arid lands of Australia contain large quantities of fertilising matter; and the supply of light and heat is practically unlimited. Water only is wanting, but the want has been supplied by methods

of storage and irrigation. Two large irrigation colonies have already been started at **Mildura** and **Renmark**. It is found that it is the direct rays of the sun, and not diffused heat, that ripen fruits; and with a supply of water which each cultivator can regulate at his will, he, as it were, "makes his own climate and modifies it for each season of the year." The results so far have been a maximum quantity of and a maximum quality in all kinds of fruit. As these Australian irrigation colonies produce their fruits in our winter, they have practically a monopoly of the British fruit-market just when prices are highest.

(i) The water from the river **Murray** is well supplied with organic and inorganic matters, and leaves on the soil a fertilising slime like that which the Nile leaves in Egypt. This irrigated soil, instead of being exhausted, becomes richer year after year.

(ii) Most satisfactory results have also been obtained from **Artesian Wells** in Queensland. In 1910 there were 716 water-yielding bores, whose *surplus* overflow converted dry watercourses into perennial streams. Artesian well water in Queensland has an irrigating effect equal to a yearly rainfall of 12 inches over 108,500 square miles.

**19. The Products of Australia.**—The chief product of this dry continent is **wool**; and this wool is of the finest quality. Next in importance come **cereals**—wheat, maize, and oats; and South Australia grows more wheat than any other of the Australian States. The pastoral industries give rise to a huge production of **butter**, **cheese**, and **bacon**. **Wine** is successfully produced in New South Wales, South Australia, and Victoria. **Fruit** of superior quality is largely cultivated; and the cultivation of **sugar**, **cotton**, and **tobacco** is developing rapidly, especially in the colony of Queensland.

(i) **Sheep** thrive wherever there is plenty of water and grass, especially on the high downs and the banks of rivers.

(ii) The best wool is that of the **merino** sheep, which was imported from Spain in 1851.

**20. The Commerce of Australia.**—The commerce of Australia is immensely large, and is increasing steadily and rapidly. The average of trade for each inhabitant of the whole continent is five times as large as the trade for each person living in Europe, and nearly five times that of the young and vigorous Dominion of Canada. The **imports** of Australia in 1874 were only about £35,000,000 in annual value; thirty-eight years after, in 1912, they were £78,000,000. The **exports** rose during the same short period from £36,000,000 to

£79,000,000. The chief exports are **wool, wheat and flour, hides, butter, copper, tallow, meat, and gold.** The commercial marine of the six Commonwealth states consists of more than 2000 steamers and sailing-vessels, with a net tonnage of over a quarter of a million.

Since the establishment of the **Australian Commonwealth** in 1900 all **inter-state** trade (including trade with Tasmania) is free. Thus free trade is carried on in an area fourteen times greater than that of Germany, which has, however, fourteen-fold the population of the Commonwealth. On all **over-sea** imports an uniform protective tariff has been arranged.

21. **Steam Lines to Australia.**—Magnificent lines of steamers keep up regular communication between Great Britain, Europe, America, and the Australasian colonies. The **Orient-Pacific Line** is one of the great steam-lines of the world. Many of the steamers belonging to this line are twin-screw steamers of 8000 to 9000 tons burden. Travellers (going by way of Naples) can land in Australia in about four weeks after leaving London; in a sailing-vessel the voyage between these places would require from ten to fourteen weeks. There are also the **Peninsular and Oriental Company** ("the P. and O."), the **British India** (which runs through Torres Strait), the **Union**, which connects the Australasian Colonies with the Pacific coast of the United States; and also a French and a German line.

The sea-passage between London and Australia is covered in 34 days.

22. **The Australian Commonwealth and its Government.**—Australia contains five divisions or colonies, which were settled at various periods, and which are now officially called "states." They are **New South Wales**, the oldest colony, **Victoria**, **South Australia**, **Queensland**, and **Western Australia**. The whole five, together with **Tasmania**, are united in one great federal union called the **Australian Commonwealth**. The Commonwealth Parliament deals with questions that affect the six federated states as a whole, but each state, as in the Dominion of Canada, has its own local parliament to settle local affairs.

(i) In both the Commonwealth and in each state respectively, there is a Governor-General and a Governor appointed from home to represent the Sovereign.

(ii) The Commonwealth Government also controls the Northern Territory of South Australia, Papua or British New Guinea, and the Federal district in which stands the future political capital, **Canberra**.

(iii) Of the five Australian states proper, Victoria is the smallest, but it contains the second largest and much the densest population. Western Australia is the largest state, but has by far the smallest population.



# VICTORIA

MELBOURNE.—LATITUDE  $37^{\circ} 50' \text{ S.}$

Amsterdam Island, Valdivia, Napier, Taranaki.

LONGITUDE  $145^{\circ} 0' \text{ E.}$  Time 9.40 P.M.

1. **Introductory.**—This, though the smallest, yet the most manufacturing, and most populous of all the Australian Colonies, was once called **Australia Felix** from the beauty and fertility of the whole country. Gold was first discovered in Victoria in 1851. It is a little smaller than Great Britain. It is bounded on the north by the Murray; on the west by South Australia; on its other sides by the sea. Through the south of Victoria run the Pyrenees, the Grampians, the Great Dividing Range; and, in the east, the Australian Alps. It has a population of 1,380,561 inhabitants. It has few navigable rivers.

(i) **Victoria** (formerly the "Port Philip district") was cut out of New South Wales in 1850 and named after our Queen. The city of **Melbourne** was, however, founded in 1837, and named after the then Prime Minister of England.

(ii) The boundary line on the west is the 141st meridian (which also happens to be the frontier of British New Guinea).

(iii) The density of population is about 14 per square mile. "More than one-half of the total population live in towns," and 40 per cent. of them live in the one town of Melbourne. The area of the colony is 87,884 square miles—or about 2116 square miles less than Great Britain. This area is divided into 87 counties.

(iv) Much of the surface is mountainous or hilly; and there is a great sandy desert in the north-west. But west of Melbourne there are enormous numbers of extinct volcanoes; and, where these occur, the soil is extremely rich. "There is greater variety of formation, more frequent alternation of hill and plain, than in any other part of the Australian mainland."

2. **Soil.**—The soil of Victoria can grow anything that can be grown in the Temperate Zone; and therefore a great many things which it is impossible to grow in England. About half of the area of the colony consists of a rich light loam; about one-third of the area is

“a rich black and chocolate soil, well-fitted for the vine”; and there is also a large quantity of rich soil of volcanic origin. About one-half of the cultivated soil is under wheat.

The wheat of Victoria ranks with the very best in the world; and the dairying industry has made very marked progress.

**3. Climate.**—Victoria, lying further south than the other Australian colonies, has a cooler climate than any of them. The isothermal of Melbourne corresponds with that of Marseilles and Madrid in the Northern Hemisphere; but the climate of Melbourne is much more equable, and the range of temperature not nearly so great. The highest temperature in the shade is  $100^{\circ}$ ; and the very lowest point reached by the thermometer in the coldest winter known was  $27^{\circ}$ . The average rainfall is 26 inches, which is pretty much the same as that on the east coast of England.

(i) The hot winds from the interior sometimes raise the temperature to a high point.

(ii) The average number of rainy days is 130.

(iii) “The drawback to Australia in the present is the cessation of productiveness about one year in three; while the squatters lose stock by the million head every few years through drought. With irrigation four crops of lucerne can be raised in the course of a single year, a field of twelve tons to the acre is attained; and lucerne improves by keeping and can be stored for three years. The real gold-mine of the future for Victoria will lie in the growth by irrigation of fruit-crops—using the phrase in its widest sense, and including wine and every kind of vegetable oil.”

**4. Vegetation.**—The flora of Victoria is in most respects similar to those of the other Australian colonies. One of its peculiar trees is the **Australian myrtle**, which is only found in this corner of the Australian continent. Victoria can also boast of “the grandest of the Eucalyptus family”—an Eucalyptus which bears the local name of the “Mountain Ash.” This tree is said to be the tallest tree in the world, and to overtop in height and exceed in weight of timber even the giant pines of California. The vegetation in the damp gullies, the narrow glens, and along the banks of the rivers in the eastern provinces of Victoria rivals in density even the richest jungle of the tropics.

Trees are found which are over 33 ft. in diameter; and the stems of which rise to the height of 200 ft. without a single lateral branch.

5. **Minerals.**—The only mineral that exists in great abundance in Victoria is **gold**. It is said that two-thirds of the area of this colony is occupied by gold-bearing rocks; and gold-mining is still one of the principal occupations of the Victorian colonists. **Tin** is found in several districts. **Copper** and **zinc** are also obtained in moderate quantities. A very superior kind of **coal** has been discovered in **Gipps Land** (in the south-east of the colony). **Diamonds** and **sapphires** have occasionally been found in the north-east; and a few rubies, topazes, garnets, etc., have also been picked up.

(i) Gold-mining gives employment to nearly 26,000 miners.

(ii) The two forms are (a) alluvial digging and (b) the crushing of the quartz-reefs.

6. **Internal Communications.**—There are over 3600 miles of railway in Victoria; and practically all belong to the State. The lines all radiate from the capital, **Melbourne**. Westwards the Inter-Colonial railway joins with the South Australian system at **Serviceton**, and at **Albury** in the north-east it enters New South Wales.

(i) From Melbourne, too, several lines run northwards to tap the river-borne traffic on the **Murray** (wool and wheat).

(ii) All the important towns in Victoria are connected both by rail and telegraph.

7. **Towns.**—There are in Victoria four towns with a population of more than 20,000 persons. These are **Melbourne**, **Ballarat**, **Bendigo**, and **Geelong**. **Melbourne** is the capital, and also the largest commercial and manufacturing town.

(i) **MELBOURNE** (591), on the Yarra, has grown in the last fifty years into a town much larger than Birmingham. It stands on seven hills which rise gradually from the Yarra, and is one of the best built and noblest cities in the world. Wide streets with high and beautiful buildings on each side, large public parks and luxuriant gardens, magnificent public edifices built of an almost imperishable stone, distinguish Melbourne among other cities. It has also a noble University and a fine Free Library. Its two suburbs, **St. Kilda** and **Brighton**, stand on the lovely shores of Port Philip.

(ii) **Ballarat** (44) is one of the most famous gold-mining towns in the world. The gold was at first found in great quantities in the alluvial soil; but this has been worked out, and gold is now got by crushing the quartz "reefs." This crushing is carried out on the largest scale and (with the "diamond drill") in the most scientific manner.

(iii) **Bendigo** (43), another gold-mining town, about 100 miles from Melbourne. It was formerly called Sandhurst.

(iv) **Geelong** (28) is a town on a branch of Port Philip Bay which manufactures "tweeds."—**Echuca** is the rising inland-port of Victoria.

8. **Irrigation.**—At **Mildura**, on the **Murray**, stands a flourishing irrigation-colony on land where rabbits once died by the hundred of thirst and starvation. The leading industry is the production of raisins, and of dried apricots and figs. Cereals, lucerne, oranges, and the vine are also grown.

9. **Industries and Commerce.**—The chief industries are **sheep-farming, agriculture, and mining**. By far the largest export is **wool**; next come **butter, breadstuffs, meat** (dead and alive), and **gold**. “Her corn and wool are of more value to Victoria than her gold.” The largest imports are **cottons, woollens, timber, iron, and coal**.

(i) **Wool** is exported to the value of about £7,000,000, but only half of this is the produce of Victoria itself.

(ii) The output of **gold** has fallen to less than £1,000,000; but, twenty years ago, it amounted to nearly £10,000,000. The total quantity of gold raised from 1851 to 1912 is estimated at over £291,500,000. (The first discovery of gold took place in 1851.)

“One of the direct effects of the discovery of gold in Victoria was to raise the price of everything—the price of landed and household property, the price of agricultural produce, the price of merchandise of every description. Another was to make Victoria better known to the world than it had ever been before, and to attract larger numbers of people to its shores than it had ever previously done. And a third was to stimulate every branch of industry; to promote the construction of roads and railways; to provide for an expansion of the shipping and navigation trade; to give an impetus to the cause of education; to further the interests of all classes in every way. But what the discovery of gold in such large quantities did for Victoria directly, it did for the rest of the Australian colonies indirectly. In lifting Victoria up, it lifted them up—not in an equal degree, but still very strikingly.”—ALLEN.

(iii) The river-navigation on the **Murray** is a very important means of carriage for the farmers in the “back-blocks.”

(iv) The manufactures of the colony are restricted to articles intended for local consumption.

(v) The total annual **imports** brought into Victoria amount to £25,000,000; the **exports** shipped from Victoria are about £19,000,000.

(vi) Victoria trades most largely with the other “states”; next comes Great Britain.

10. **Education.**—Large and generous provision has been made for the education of the young in this State. There are four kinds of Educational Institutions: A University; Primary (State) Schools; Technical Colleges; and Private Schools.

(i) The University contains three Colleges.

(ii) The instruction given in the State Primary Schools is strictly secular.

(iii) The Technical Colleges embrace three Schools of Mines, an Agricultural College, and a “Working Man’s College.”

(iv) Every town of any importance has a Public Library.

## THE CONDITION OF VICTORIA

**1. Area** . . . . . 87,880 square miles

This is about 1210 square miles less than Great Britain (less than Great Britain by the size of Gloucestershire).

**2. Population** . . . . . 1,380,561

(i) There are about 7000 Chinese.

(ii) There are less than 800 aborigines.

(iii) More than one-half of the population of Victoria live in towns; and Melbourne alone contains five-twelfths of the whole population.

**3. Exports (1912)** . . . . . £19,113,000

The chief exports are wool, hides, live-stock, butter, breadstuffs, preserved meats, and gold. But most of the gold is only re-exported.

**4. Imports (1912)** . . . . . £25,081,000

The chief imports are cottons, wrought-iron, and clothing.

**5. Manufactures** (almost entirely for home consumption) . . . . . Increasing

(i) About 116,000 hands are employed in manufactures.

(ii) The manufactures include those of leather, wool-washing, and distilling.

**6. Communications (internal)** . . . . . Excellent

(i) There are over 3600 miles of railway.

(ii) There are nearly 7000 miles of telegraph line, and 16,000 miles of telephone wire.

**7. Communications (external)** . . . . . Excellent

There are steamships to all parts of the world.

## NEW SOUTH WALES

SYDNEY.—LATITUDE  $33^{\circ} 54'$  S. Adelaide, Cape Town, Perth (W. Australia), about,  
Montevideo, Buenos Ayres, Valparaiso, Santiago (Chili).  
LONGITUDE  $151^{\circ} 8'$  E. Time 10.4 P.M.

1. **Introductory.**—This colony, the oldest in Australia, is about 900 miles long by 600 broad. It is about ten times the size of Ireland, and equal to the whole of the German Empire and Italy taken together. It consists of mountain, table-land, and plain. The chief ranges running through it are the **Blue Mountains**, the **Liverpool Range**, and the **New England Range**. Its population is not very much larger than that of Victoria, though its area is four times as large.

(i) It is bounded on the north by Queensland; on the east by the Pacific; on the south by Victoria; and on the west by South Australia.

(ii) The area of New South Wales is 310,700 square miles; the area of Ireland is over 32,000. It comprises the greatest part of the great Murray-Darling basin, which is known as the Riverina District.

(iii) The population is 1,777,534.

(iv) The population of the colony gives only about 5 persons to the square mile. This is due to three causes: (a) its mineral treasures are more thinly distributed; (b) the arable lands occur as oases dotted at wide intervals over the country; (c) the rainfall, over a great part of the Riverina, ceases to be sufficient for crops.

2. **Rivers.**—The chief river of New South Wales is the **Murray** with its great affluents, the **Murrumbidgee** and the **Darling**. There are also other large tributaries, such as the **Lachlan** and the **Macquarrie**, which stop running in dry seasons, and in wet seasons inundate the low-lying lands of the interior for weeks. There are also, on the outer slope of the Dividing Range, between the mountains and the Pacific, a number of small rivers, the most important of which are the **Hawkesbury** and the **Hunter**, each about 300 miles in length, and each navigable for short distances.



(i) The **Murrumbidgee** has a course of 1350 miles, and falls into the Murray a hundred miles above the junction of the Darling.

(ii) The **Darling** (with the **Macquarrie** and other large tributaries) drains the vast expanses of the Darling Downs in Queensland and the Liverpool plains in New South Wales. It joins the Murray at Wentworth. From that point it has been navigated in a small steamer a distance of 1800 miles.

(iii) "In dry weather these rivers shrink up into chains of water-holes. There is scarcely ever any stream, owing to the very gentle fall, the long course which is traversed, and the rapid evaporation in that hungry soil and under that ardent sun. In winter, however, they resume their flow, and are liable to be heavily flooded."

3. **Soil.**—By far the largest part of the area of New South Wales is pasture-land; and only about one acre in every 200 is under cultivation. The richest soil in the colony is on the eastern slope, on the banks of the short rivers, which bring down from the mountains an alluvium of great fertility and of great depth. It is, however; to the pasture-lands that the chief wealth of the colony is due; and this wealth consists mostly of enormous flocks of sheep and large herds of horned cattle. Parts of the plains contain tracts of rich black loam, which, if properly watered, would be almost inexhaustibly fertile.

(i) "The pastoral resources of **New South Wales** are not exceeded by those of any other country or corresponding area on the face of the globe. Vast tracts of rich natural pasture exist in all parts of the colony, especially in the western districts, where the pastoral holdings are of vast extent, and the flocks of sheep each number many thousands." In some places, the mountains are "grassed to their very summits."

(ii) A good deal of the rich soil of this colony is made up of decomposed trap, basalt, and other basaltic rocks. On such soils excellent wheat and wine can be grown.

4. **Climate.**—Various climates are to be found within the limits of New South Wales, from the moist and almost tropical heat on the banks of the Clarence (in the north of the colony) to the bracing cold of the high table-lands. The average temperature of Sydney in the shade is  $62\frac{1}{2}^{\circ}$ . The air is so pure and so elastic, it contains so unusually large an amount of ozone, that the great heat is little felt, and is never followed by weakness or exhaustion. It is, on the contrary, stimulating and invigorating. On the table-lands there is, in the day-time and in summer, a high temperature, a dry air, and little wind. The average rainfall at Sydney is 50 inches: on the high plains 20 inches: but the distribution of the rain is singularly unequal, one-half of the whole amount sometimes falling, tropic-wise,

in a single month. The chief characteristic of the climate of the whole colony is the "abundance of sunshine."

(i) "Sydney in June, which is the Australian December, is one of the most enjoyable places on earth; and, for eight months out of the twelve at least, it is impossible to conceive a climate more delightful or better adapted to persons of delicate health. The summer is long and dry, with now and then a hot wind from the north, followed by a 'brickfielder.'"

(ii) The climate is, on the whole, extremely favourable to good health and long life. "The death-rate of the Australian colonies is 17 per 1000,—which is lower than the average of any European country."

"Nowhere within the wide domain of GREATER BRITAIN has a man so good a chance of life as in Australia and in New Zealand."

(iii) New South Wales has in reality four climatic zones: (a) The Coast Belt, which varies in breadth from 20 to 100 miles; (b) The Table-Land districts; (c) The Western Slopes; (d) The Interior or "Salt-bush Country."

5. **Vegetation.**—Absence of variety—monotony in form and colour, is the chief characteristic of the flora of New South Wales. "The dull evergreen leaves alter little with the changes of the seasons." Forests—"open forests"—cover nearly the whole area of the colony, except in the basins of the Lachlan and Murrumbidgee, where wide treeless plains stretch before the eye, clothed with salt-bush or with scrub or with natural grasses. The most important and the most frequent tree is the **Eucalyptus**, of which there are many species. The courses of the streams are marked, on the river flats, by the tall trees called "flooded gum" and by apple-trees. The **iron-bark**, another kind of eucalyptus, which bears a strain nearly twice as great as that of the best oak, the **blue gum**, the **spotted gum**, the **stringybark** (the timber of which is very useful, and the bark of which is largely used for thatching and for the manufacture of paper), the **messmate** (which is sometimes 250 feet in height), the **grey gum**, the **tallow-wood** (a very strong and durable timber, which is much used for the decking of ships), the **mountain ash** or "white-top," the **turpentine tree** (the timber of which resists all the attacks of the teredo in salt water) are the chief trees in what are called the "**open forests**."—The trees of the "**brush forests**" differ entirely from those of the open forests; there is no monotony either in the character of the trees themselves or in the colour of their foliage. **Tree ferns**, tall and very graceful, **palms**, **cabbage-trees**, **Bay figs** of enormous size, the **red cedar**, the **tulip-wood** (with its fine grain), the **colonial pine** (or Cunningham Araucaria), the

noble **beech**, all these and many more are found in the rich leaf-mould and volcanic soil of the "brush-lands." The "**scrub forests**," which grow on the poorer and thinner soils, are represented chiefly by the **pine**, the **acacia**, and the **eucalyptus**—trees beautiful in form and striking as features in the landscape, but of small commercial value.

(i) "The most uninviting portion of the colony is covered with scrub; and the mallee districts, clothed as they are with stunted timber, a variety of the eucalyptus, impress the traveller more unfavourably than would even a barren waste."

(ii) "Australian hardwood trees are remarkable for the great size of the beams which may be obtained from them, as well as for the great toughness and durability of the wood."

"The grey **IRONBARK** has a tensile strength of 6·14 tons per square inch; while English oak has a tensile strength of only 3·38 tons, and teak 1·47 tons."

(iii) The woods of the brush forest are "well adapted to the finest description of cabinet-making."

**6. Animal Life.**—The mammalia of New South Wales are chiefly represented by "the oldest animal known,"—the **marsupial**, which is only found elsewhere in the Americas. The **kangaroos** and **wallabies** are still numerous enough in the country districts to cause great damage to the natural grasses of the sheep-runs. The thick soft furs of the **opossum** form a valuable article of commerce. The **dingo**, or native dog, works great havoc among the sheep-flocks. **Flying-foxes** do much damage in orchards. The most curious animal in the colony is the **Duck-bill** or **Platypus** (or "*Ornithorhynchus paradoxus*")—a mammal with the bill of a duck, and that lays eggs.—The parrot family of birds includes the **love-bird**, the **green parrot**, and many kinds of **lories**—all with gorgeous and varied plumage; and, among the larger kinds, the white and black **cockatoo**, the yellow and pink-crested **gallah**. **Honey-eaters** are numerous. In the western parts of the colony, the **brush-turkey** exists in large numbers, and its flesh is highly prized. In the same districts is found the **emu**, the largest of Australian birds. **Cranes**, **black swans**, and wild fowl of all kinds are seen in crowds near the watercourses. The great **kingfisher** (or "laughing jackass") is highly valued for its eagerness in destroying snakes. Clouds of **pigeons** may be seen in the great primeval forests of the coasts.—The **schnapper** (or "red bream") is the most valuable of all Australian fishes. The black **rock cod** is highly prized; the **flat-head** is an edible fish of excellent quality; and several kinds

of whiting are in great demand in the Sydney markets. **Mullet**, **mackerel**, and **gor-fish** are also consumed in large numbers. **Oysters** are excellent and very plentiful.

(i) In the year 1888 the number of **kangaroos** and **wallabies** in New South Wales was estimated at 4,600,000; and, in that year, 1,310,910 of these animals were destroyed.

(ii) A price is now paid for every **dingo** slaughtered.

(iii) The eggs of the **platypus** are membranous; and, so far, this animal must therefore be classed amongst reptiles.

The duckbill "frequents streams and ponds, and forms its dwelling by burrowing deeply into the banks. To some extent it is sought after for the sake of its thick, warm, dark-brown fur, but otherwise it is not much noticed."

(iv) The "**native companion**," a large water-bird, is also found in the west.

(v) "The **little turtle-dove** of the Murray River is the prettiest specimen of the dove family."

(vi) "The **sea-mullet** is regarded by some authorities as unsurpassed in richness and delicacy of flavour by any fish in the world; and it visits the shores of New South Wales in countless numbers in the season when it is in the best condition."

(vii) "Although during the winter season immense shoals of **herrings** visit these coasts, no attempt is made to take and preserve them. They are quite as abundant as the herrings of Scotland, and superior in flavour."

**7. Minerals.**—The metal the discovery of which "made Australia a nation" exists in considerable quantities in New South Wales. **Gold** to the amount of over £50,000,000 has, since its discovery in 1851, been dug out of the soil of this State. At present, the annual value of the yield of gold amounts to something under a million. **Coal** is the most profitable mineral, as the value of its output is about 3 million pounds sterling a year. **Silver** and **silver-lead-ore** amount in annual value to over 3 millions. The mining of **tin** is a thriving occupation, and amounts to over half a million per annum. There is a great deal of **copper** in the colony. **Iron** is widely spread throughout the whole state, and occurs principally in the form of magnetite, brown hematite, and bog-iron. At Mittagong, Berrima, and in the Lithgow valley, west of Sydney, coal, iron, and limestone occur together. The city of Sydney is built on a formation of **sandstone**, which provides "an inexhaustible supply" of building material of the best quality.

(i) The amount of **gold** taken out in the year 1852 was over £2,660,000 worth. In 1862 it was £2,360,000. In 1888 it had fallen to £300,060. But from 1896-9 the average yearly yield of gold was over a million, and sank again in 1912 to £702,000. The renewed output is obtained from the crushing of the quartz-reef.

"The abandonment of a gold-field is not always a loss to the country. The digger becomes an agriculturist; and 'those who came to dig remain to shear.'"

(ii)	The out-put value up to 1903 of gold was £50·9 m.		
	"	"	silver ,, £35·2 m.
	"	"	tin ,, £6·8 m.
	"	"	coal ,, £44· m.

"The gold-fields extend with short intervals throughout the entire length of the colony. The approximate auriferous area as far as known is about 70,000 square miles. It is highly probable that rich and extensive gold-fields will be discovered for many years to come. There are immense tracts in the interior which have not yet been prospected. Except in some few localities, quartz veins have not been worked to a great depth. Alluvial lands have in some instances been worked to a depth of 200 feet, and there are the strongest indications of deep lodes in various parts where no attempt has yet been made to work them. Gold-mining, as hitherto carried on, has been principally confined to the working of river-beds and shallow alluvial claims. Extensive areas of country are known to be auriferous, and it is believed that there will be ample scope for the remunerative employment of a large population in both alluvial and quartz-mining."

(iii) New South Wales has produced in the 50 years between 1851 and 1901 about £50,000,000 of gold. Victoria, in the same time, produced over £260,000,000.

(iv) Silvertown, on the Barrier Range, west of the Darling, is the most famous field for silver-digging. "The Broken Hill lode is the largest as yet discovered." The production of silver and silver-lead has increased from £9000 in 1882 to £3,481,000 in 1912.

(v) "Within the years that have elapsed since the opening of the tin-fields in 1872 the value of the tin raised in New South Wales amounted to over £6,600,000."

"The existence of tin was first made known by Mr. Clarke in 1852, a year after the discovery of gold. The quality of it is not in any way inferior to that from the Straits Settlements, and its development during the last decade is very large. In 1871 the quantity raised was 896 tons, while in 1888 it had increased to 4809 tons. The stanniferous area of the colony is estimated at 5½ million acres."

(vi) The area over which coal is distributed is nearly as large as the whole of Scotland. The chief coal-fields are near the coast, round the towns of Newcastle, Illawarra, and Lithgow. It is calculated that the Newcastle field, at the present rate of production, will last for 500 years.

(a) Newcastle (New South Wales) is singularly well fitted by situation to become the port of supply for all the countries of the southern seas. Every week vessels leave its wharves coal-laden, not only for the other Australian colonies, but for China, India, the Pacific Slope of North and South America, Mauritius, the Cape of Good Hope, and other lands. Every provision has been made by the Government of the colony for shipping coal; and over two miles of wharves, furnished with cranes and shoots capable of loading 16,200 tons per day, line its shores.

(b) The total value of the minerals raised in 1912 was £11,228,000; coal, silver and silver-lead, and gold being the chief.

(vii) The value of the output of coal in New South Wales has risen from £1800 in 1830 to £3,660,000 in 1912.

**8. Industries.**—The most important industry in New South Wales is undoubtedly agriculture. Next in importance come manufactures; after this, but at a long distance, mining, and close upon mining comes **shepherding**. But, though shepherding comes last in the number of persons it employs, it is by far the first in profit,

as 75 per cent. of all the goods exported from the colony consists of wool and butcher meat, while one-third of all the earnings of the goods traffic of the railways of the colony is due entirely to this source. New South Wales stands easily first of all the Australian colonies in the value of its plant and its steam-power for manufacturing purposes. Though there is no great staple manufacture for export, yet there are very many minor manufactures which have become established and important industries in the State. For instance, the manufacture of flour and other cereal products gives employment to many, as also does the preparation of preserved meats. Both wine-making and brewing are also increasingly carried on. The pastoral wealth gives rise to tanning and its related industry of boot-making, as also to the weaving of "tweeds." Other trades worth noticing are saw-milling, brick-making, and iron-founding, while the presence of coal round Newcastle gives rise to ship-building, copper-smelting, and engineering works. In fine, New South Wales excels in all domestic manufactures, with which she has learned to supply herself. Every kind of labour is handsomely paid ; and the working-day in most trades is only eight hours.

**9. Agriculture and Pasturage.**—"There is, in the colony of New South Wales, so great a variety of soils and climate, that almost any kind of crop—whether specially the produce of temperate, and even of cold climates, or of sub-tropical regions—may be grown." **Maize** is grown in almost every part of the strip of land on the coast ; **sugar-cane** in the warmer regions of the north ; of **wheat** not much is grown—not one-third of the crop of maize. A beginning has been made in the cultivation of the **vine** ; but the wine made is not of so high a quality as was expected. But it is the work of pasturing sheep and of growing **wool** that is by far the most important pursuit in the colony of New South Wales. The number of sheep in the colony in the year 1803 was about 10,000. In the year 1914 there were over 40,000,000. New South Wales is, in fact, the great Australian centre of sheep-rearing. The annual value of the wool exported has grown from £1,500,000 in 1860 to about £10,000,000 in 1914.—**Cattle-rearing** has somewhat declined, the climatic con-



ditions not being so favourable to them as to sheep. There were in 1875 over 3,000,000 cattle, and there are not many more at the present time.

(i) **New South Wales** stretches through 8 degrees of latitude (from 29° to 37°); and there is also the considerable difference of altitude between the high interior uplands and the hot lowlands on the coast belt.

(ii) **Oranges and lemons** thrive on the north coast; and **grapes, peaches, apricots, etc.**, are largely grown in the neighbourhood of Sydney. "New South Wales is one of the most favoured among countries in the production of fruit and vegetables for preserving; and her climate is such as to allow her to grow at the same time excellent oranges and English fruit in the most perfect condition." . . . "The orange is largely exported to the neighbouring colonies, and many proprietors of orangeries who began life in a very small way have realised a fortune. The olive, caper, fig, strawberry, raspberry, gooseberry, currant, custard-apple, guava, banana, areca-nut, almond, passion-fruit, quince, plum, nectarine, pear, apple, and peach all thrive. Fruit is cheap, and is consumed in large quantities by all classes.

"Almost every description of garden-flower grown in the United Kingdom is found luxuriantly thriving during the greater part of the year in New South Wales. Violets, pansies, wall-flowers, sweet-williams, mignonette, lupins, balsams, roses, convolvuluses, nasturtiums, candytuft, golden feather, and other popular garden-flowers, are to be met with in every direction."

(iii) The yield of **wheat** in New South Wales is only 8½ bushels per acre. In Denmark it is 31 bushels; in Great Britain 27. (To the wheat crop of the World Russia contributes the largest amount—90 million quarters (of 480 lbs. each), then come the U.S.A. with 87 million, and India with 45 million.)

(iv) In the year 1862 there were in New South Wales only 2 acres under sugar-cane; in 1902—forty years after—there were over 20,000 acres.

(v) "Grape-vines thrive well, and bear large crops of succulent fruit, equal in size, appearance, and flavour to the most renowned products of France, the Rhinelands, and Spain; but the making of wine is still in its infancy in this colony."

(vi) Spain used to produce the finest wool—merino; but New South Wales comes very close. Merino sheep were introduced in 1797. "The climate of Australia has in some respects changed the character of the Spanish fleece. The wool has become softer and more elastic; and, while diminished in density, it has increased in length."

(vii) **Drought** is the great enemy of sheep-rearing. In 1877, over 8,000,000 sheep perished; in 1884, over 12,000,000; in 1901, about 10,000,000.

(viii) **New South Wales** has 4 times more sheep than Victoria.

(ix) In New South Wales the animals that consume the grass which is required by the flocks and herds are regarded as more destructive than those which attack the herds themselves. Of the former, **rabbits** are the worst. They infest an area of over 100,000,000 acres. Over 25,000,000 rabbits were destroyed in 1887; but there are now more than ever. As much as £200,000 has been spent in one year for their extermination. Wire-net fencing is erected against them along the whole line of the western frontier.

**10. Commerce.**—The commerce of New South Wales ranks highest in the Commonwealth. The total value of the imports and exports is over £60,000,000. There are only two other parts of the British Empire that surpass it : these are India and the Dominion of Canada. But Canada has a population five times as large ; and India has a population 180 times as large. The tonnage of the ships entering and leaving the ports of this colony has grown from 22,000 in 1825 to 8,000,000 in 1904. Of this amount, the tonnage under the British flag is nearly 90 per cent. **Sydney** is the chief port—as well as the capital—of the colony ; and the annual value of its trade exceeds that of any port of Great Britain, with the exception of London, Liverpool, and Hull. Sydney is, in fact, “the port of the Southern Hemisphere.” The chief imports are : **drapery, iron manufactures and machinery, clothes, flour, sugar, and tea.** The chief export is **wool** ; and, at a great distance after, **coal, coin, preserved meats, leather, hides, and tallow.** In other words, the chief exports are of **raw materials** ; and the principal imports of **manufactured articles.**—The trade of New South Wales includes some of the produce of Queensland ; goods transferred from one State to another for shipment oversea are counted as the export of the State from which they were finally despatched

(i) Though **India** has a population 180 times as large, its trade is only four times as large as that of New South Wales.

(ii) The **tonnage** (not the value) of the shipping of Sydney is only surpassed by that of five English ports : London, Liverpool, Cardiff, Newcastle, and Hull.

(iii) The exports of New South Wales are in value to those of Victoria as 14 is to 9. The average value of exports per head is £19 ; and this is rather more than that of Queensland, which has a very small but wealthy population.

(iv) “The trade of New South Wales is larger, both in the gross amount and in the value per head, than that of any of the other colonies of Australasia.”

**11. Communications.**—There are in the colony of New South Wales 50,000 miles of **road**, 10,000 miles of which are metalled and gravelled. There are over 5000 miles of **railway.** The various lines branch out from **Sydney.** The Great Southern Line runs to **Albury** (386 miles) to connect with the Victorian system. The Great Western strikes inland to **Bourke**, on the Darling (503 miles) ; and the Great Northern touches the Queensland border at **Tenterfield**

(479 miles). Though Queensland is double the size of New South Wales, yet the latter has nearly as great a railway mileage as the former.

(i) The "abrupt wall of sandstone" in the Blue Mountains, which barred all access to the interior of the country, is now surmounted by a "zigzag railway," which cuts through rocks or is carried over gullies by viaducts.

"The two remarkable triumphs of engineering skill known as the Zigzag and the Great Zigzag, by which the lofty heights of the Blue Mountain Range are ascended and descended, form two of the leading sights of the colony."

Before a road was made, travellers could get to the western plains only by "creeping through dense forests, or by scaling tremendous precipices."

(ii) "There are 7600 miles of road which wind their way through the forests of the interior, chiefly along the lines marked out by the cart-wheels of the earliest settlers." These roads are "good" only in dry weather.

(iii) The gradients on the New South Wales lines are exceptionally steep, as rough and precipitous ranges have to be crossed before the interior plains are reached. The Great Northern line at Ben Lomond reaches a height of 4471 feet above sea-level. The most famous piece of railway engineering is the "Zigzag," which descends from the Blue Mountains into the Lithgow valley.

There are four specially important lines of ocean steamships which enter and leave Sydney: the P. and O. Company, the Orient, the Messageries Maritimes of France, and (before the great European War of 1914) the North German Lloyd's. Sydney is thus well served by some of the greatest liners in the world, and has a tonnage which far exceeds that of any other Australian port. In its magnificent harbour the largest vessels can lie with safety.

**12. Education.**—The Government of New South Wales spends over one million a year on education. Instruction is compulsory in all parts of the State. In addition to the State schools—High, Primary, and "House-to-House"—there are many good private schools and colleges. The **University of Sydney** is a famous institution; and "its degrees in Art, Law, and Medicine are recognised as on an equality with those of the United Kingdom." There are also at Sydney an excellent **Technical College** and a **Public Library**.

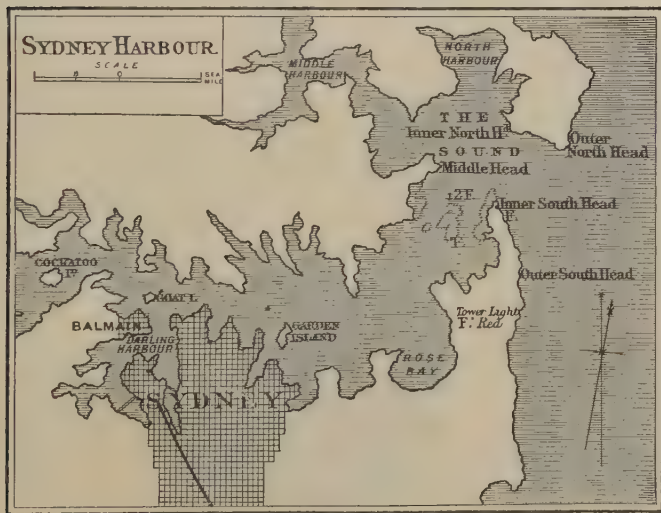
(i) The advance made in Primary Instruction is shown in the increase of the number of those persons who can sign their names in the marriage register. In 1857 about 28 per cent. could only sign by marks; in 1890 this number had fallen to 3 per cent. (In Victoria, the number is only 1 per cent.)

(ii) The State contributes over £5 per annum towards the instruction of each child

**13. Towns.**—There is only one large town in New South Wales—**Sydney**, the capital. Six others have over 10,000—**Maitland**, **Newcastle**, **Paramatta**, **Bathurst**, **Goulburn**, and **Broken Hill**.

(i) **SYDNEY** (637), the oldest city in Australia, is the capital of New South Wales. Its commanding situation on a splendid harbour, on a number of peninsulas, with miles of frontage for business or for pleasure, and its broad streets, with noble public buildings, have earned for it the title of "Queen of the South." Its natural situation makes it one of the finest cities in the world: the sea, with its coves, bays, and inlets, looks in upon it everywhere; its rugged promontories, beautiful gardens, its mingling of sea and land, hill and valley, rock and wood and grassy slopes, its combination of the most luxuriant vegetation both of tropical and temperate zones, startle and delight the visitor at every turn. Port Jackson (perhaps the finest harbour on the globe) may be compared with the harbour of Rio Janeiro. Sydney has six public parks, and a botanic garden which is one of the wonders of the world. Sydney is the great emporium of the colony, and now ranks as a great world-port. "Sydney is the final port of every line between Australia and the outside world except one—the British India, which stops at Brisbane. All the others, British, French, and American, make Sydney their headquarters."

(a) "So inexpressibly lovely is Port Jackson that it makes a man ask himself whether it would not be worth his while to move his goods to the eastern coast of Australia, in order that he might look on it as long as he can look at anything."—TROLLOPE.



(b) "The traveller, who first enters it from the rocky coast, is struck with wonder as he surveys the innumerable bays and inlets—in the distance the gardens and villas, the wooded hills, the picturesque city with its luxuriant vegetable growth, while nearer at hand the yachts glide in and out among the more stately merchantmen and steamers."

(c) "Wool from the great plains about and beyond the Darling; copper from Cobar and the neighbouring mines; gold from the various fields scattered throughout the colony; silver from the Barrier Ranges; coal from the Blue Mountains; tallow and hides from all the pastoral districts—all these find their destination in the great port of Sydney."

(ii) **Maitland**, on the Hunter, owes its wealth to the floods of that river, which annually bring down new soil to the surrounding country. Immense crops of maize are raised. Population in 1911—11,000.

(iii) **Newcastle** is the principal shipping port on the east coast; it is second only to Sydney. It ships chiefly coal, not only to the other colonies, but also to ports in Asia and the Pacific slopes of the two Americas. Population in 1911—55,000.

(iv) **Paramatta**, a little to the north of Sydney, is famous for its luscious fruits—its orchards and orangeries. Population in 1911—12,000.

(v) **Bathurst** is the principal town in the colony on the western slopes. It stands in the middle of the chief wheat-growing district of the colony, and also in the neighbourhood of gold, silver, and copper mines. Westward lie the great open plains; to the east rise the picturesque summits of the Dividing Range. Population in 1911—nearly 9000.

(vi) **Goulburn** is the largest town on the south table-land, in the midst of a prosperous wheat, hay, and fruit district. Population in 1911—10,000.

(vii) **Broken Hill** lies among the Barrier Ranges of the far west, near the South Australian border. It is the centre of the largest silver-mine in the world, and occupies ground that, previous to 1883, was used as a sheep-walk. The produce of the silver-mines is carried by railway to Adelaide in South Australia, and there exported. Broken Hill is the third largest town in New South Wales. Population in 1911—82,000.

**14. The Federal District.**—This is a small district in the south-east of the State, which has been bought by the Commonwealth Government for the purpose of building a federal capital. The name of the capital of the Australian Commonwealth that is to be is **Canberra**



## THE CONDITION OF NEW SOUTH WALES

**1. Area** . . . . . 310,700 square miles

This is more than one-half as large again as the German Empire.

**2. Population** . . . . . 1,777,534

There are about 7000 blacks in the colony.

**3. Exports (1912)** . . . . . £32,958,000

(i) The staple export is wool to the amount of £10,000,000.

(ii) Next comes coin; third, coal; fourth, hides and skins; fifth, preserved and frozen meat.

**4. Imports (1912)** . . . . . £32,303,000

The chief imports are iron and steel goods and wearing apparel.

**5. Manufactures** . . . . . Increasing

(i) About 115,000 persons are engaged in manufactures.

(ii) Chief manufactures: leather, sugar, ore-smelting, and machinery works.

**6. Communications (internal)** . . . . . Excellent

(i) There are about 10,000 miles of good metalled road.

(ii) There are over 5000 miles of railway.

**7. Communications (external)** . . . . . Excellent

There are lines of steamers to all parts of the world. Chief ports: Sydney and Newcastle.



## SOUTH AUSTRALIA

ADELAIDE—LATITUDE  $34^{\circ} 56'$  S. Sydney, Cape Town, Montevideo,  
Buenos Ayres, Santiago (Chili), and Valparaiso, about.  
LONGITUDE  $138^{\circ} 40'$  E. Time 9.14 P.M.

1. **Introductory.**—South Australia is the third largest State on the Continent, and stretches from  $26^{\circ}$  South latitude to the southern coast along the Great Australian Bight. It used to embrace all the central part of Australia right up to the northern shores, but in the year 1911 the central belt north of  $26^{\circ}$  South latitude and up to the coasts of the Arafura Sea was placed under the direct control of the Commonwealth Government and became known as the **Northern Territory** (see p. 299). The total area of South Australia thus reduced amounts to 380,000 square miles—or thrice the size of the United Kingdom. The population, however, is only 408,588 (1911 census); for, indeed, it is only the south-east corner that can be said to be really inhabited.

2. **Build and Rivers.**—The eastern part of South Australia is divided longitudinally by the **Flinders Range**, which extends from near the south-eastern extremity of the State northwards past Lake Torrens nearly to Lake Eyre. This district is in consequence hilly, and enjoys, thanks to the attractive power of the mountain range, a fair rainfall. The western portion is largely a desert plain, which can never be brought into cultivation. The northern part of the State between Lake Eyre and  $26^{\circ}$  South latitude is also level or gently rolling country, but, compared with the fertile land that lies in the hill country of the south-east, it is on the whole unpromising. The only really important river is the **Murray**, which flows for some 250 miles of its length through the south-east corner of the State into the Southern Ocean. Taken as a whole, South Australia occupies a very inferior position, as regards rivers, in a continent most of which is very poorly watered.

(i) Even the Murray does not fall direct into the ocean, but into Lake Alexandria, a wide shallow sheet of brackish water. Thus its usefulness as a commercial outlet *s, so far as South Australia is concerned, wholly discounted.*

(ii) Interesting, from a geographical point of view, is the continental basin which discharges into Lake Eyre. The Eyre Creek, Cooper's Creek, and the Macumba River are among the largest of these continental rivers, but they are little known, and often altogether cease to flow.

3. **Lakes.**—There are a great many lakes ; and some of them are of great extent. The "Lake District" fills an area of over 1000 square miles ; and some of the lakes are more than one hundred miles long. Most of them are mere "dead masses of salt water," growing or decreasing in size as the season is dry or rainy, and surrounded by dreary deserts or steppes. The lakes of South Australia fall easily into two groups. The first group is composed of **Lake Amadeus** and the **Salt Lakes** in the Victoria Desert, in the far west. The second group lies in the north and centre, and is composed of **Lakes Eyre, Torrens, Frome, Gairdner, Island Lagoon**, etc.

In the south-east lie a number of small beautiful fresh-water lakes, which occupy the craters of extinct volcanoes. The best known of these is **Blue Lake**.

4. **Soil.**—The southern part of South Australia has long stretches of rich agricultural land, mountain-ranges well wooded, vast plains that are waterless and sterile. All kinds of soil are found, from barren sand to the richest alluvium. But, speaking generally, South Australia, always excepting the south-east, is a dry, burnt-up state. The deserts, which occupy considerable areas, are in some instances covered with the barrenest sand, which is always shifting with the wind, and in others with stones. Sometimes barrenness is produced by the presence of salt in the soil ; other places, not so barren, are overspread with spinifex grass or a dense blanket of scrub. But large tracts, even in the dry areas, are well fitted for pasturage, and there are wide plains and valleys which are admirably adapted for agriculture.

The total area of the colony is generally divided into three parts : (a) one-third desert, scrub, and rock ; (b) one-third forest and mountain, the latter of use for pasture ; and (c) one-third good grazing and agricultural land.

5. **Climate.**—South Australia is the driest part of a very dry continent. The average annual rainfall at Adelaide is about 21 inches. The four very hot months are December, January, February, and March. During eight months of the year the climate is delightful ; it is the climate of Southern Italy. The general summer and winter temperatures are 100° and 53° respectively, and the mean yearly rainfall is 16 inches in the plains and 42 in the hills.

(i) The maximum summer temperature in the shade is 110°.

(ii) The extremely hot weather that now and then comes rarely lasts more than two or three days. "The hot winds sweep with a blast like that of a furnace. A person suddenly leaving a substantially built, and therefore a cool, house, can hardly believe that the scorching blast which salutes him is not caused by a neighbouring fire. Fortunately the hot winds are rare, occurring only in the summer, and then only for one, two, or at most three days; lulling at night and raging again in the forenoon."

**6. Vegetation.**—The plants of South Australia resemble those of Western Australia; but are less varied. The climate suits the **vine**, the **olive**, and other fruits that require dry heat. The **hop** is also cultivated; but **wheat** is grown on about two million acres of land. Enormous areas are destitute of trees; but hundreds of thousands are planted every year. Temperate fruits like the apple and pear, which require more rain than the vine, olive, or orange, are successfully cultivated in the moister south-east.

**7. Minerals.**—South Australia possesses vast deposits of **copper**, **iron**, and **silver-lead**. By far the most important of these is copper, which is to South Australia what gold is to Victoria. **Gold** is found in many parts, but not in quantities to compare with the output of other states. The chief copper-mines and copper-smelting works are at **Moonta** and **Wallaroo**. Iron exists in large quantities—in the form of hematite, bog-iron, and other rich ores.

(i) The **Burra-Burra** copper-mine, near Koorunga, was at one time the richest in the colony. It is not worked now.

(ii) Copper comprises the chief mineral wealth of South Australia, which is the least mineralised of all the Australian states.

**8. Industries.**—The most important industry is **agriculture**, which is almost entirely limited to the raising of wheat. In fact, this colony is the "granary" of Australia, and one of the great granaries of the world. Next to agriculture comes **wool-growing**; and South Australia possesses about five millions of sheep. The annual value of the wool-clip is over £2,000,000. The making of **wine** is an occupation which increases every year; and **fruit-growing** is also becoming a lucrative pursuit in many parts of the colony. There are a few manufactures, and these will probably extend.

(i) The area of wheat-growing has doubled itself within the last ten years. The average wheat yield is 8 bushels an acre. In England it is 27 bushels.

(ii) **Apples** and **pears** will grow everywhere; **oranges** in warm spots; **strawberries** in the hills; and **olives** in the drier parts of the colony. "The olive-oil of South Australia was pronounced at the Paris Exhibition of 1878 to be equal to any in the world."

**9. Commerce.**—The trade of South Australia consists principally in the export of its **raw materials**—agricultural and mineral. The export of **wool** stands first, and in 1912 it amounted to £2,032,000; next come **wheat** and **flour**—each about half a million; and next **copper** and **wine**—between a half and a quarter of a million. The imports consist chiefly of **iron, clothing, cottons, boots, and shoes, timber, coal, and machinery**. The total annual trade of the colony amounts to 16 millions, the exports as a rule being well in excess of the imports. Great Britain purchases seven-eighths of the wool sold by South Australia; and it also takes about one-third of the wheat and flour. The rest of the trade is done with the other Australian states; and only 5 per cent. goes to foreign countries.

*N.B.*—The relatively large volume of South Australian trade is partly due to the fact that the colony (1) exports, *via* the Murray, a great deal of New South Wales wool, and also the whole of the produce of the Broken Hill silver mines; and (2) that it imports practically everything for the large population of Broken Hill.

**10. Communications.**—The colony possesses good roads, and is beginning a railway to run with the **Overland Telegraph Line** across the continent. At present the railways are only built in the more settled districts, and the main line runs from **Mount Gambier**, in the agricultural south-east, through **Adelaide**, the capital, to Oodnadatta, north-west of Lake Eyre. There is an important branch line to Broken Hill. On the north the future trans-continental line has been built as far as Oodnadatta (see p. 299).

(i) The educational system is much the same as that so thoroughly established and so well cared for in the other colonies of Australia. South Australia was the first of all the Australian colonies to pass an educational law.

(ii) The **Overland Telegraph Line** of South Australia is one of the greatest wonders of the world. A line, 1883 miles long, stretching across a whole continent from Adelaide to Port Darwin, and crossing a series of deserts, most of them entirely waterless, with tracks to be cleared through almost impenetrable scrub, with drought to be fought by the engineers in one place and floods in another, with food and all materials to be carted hundreds of miles, and all this done by one of the poorest Australian colonies, must command our admiration and respect.

**11. Towns.**—South Australia is the home of small towns; for it is an agricultural and pastoral colony. The only large town is **Adelaide**,

the capital ; and, with its suburbs, it has only 192,000 inhabitants—or one-fourth of the population of Liverpool. But it is a noble city situated on both sides of a lake formed by the river Torrens,—with splendid broad streets (80 miles of them), many planted with trees, well supplied with pure water from the neighbouring hills, with markets, tramways, baths, the electric light, and every other accompaniment of civilisation. The Parliament Houses, the Government Buildings, the University, the Town Hall, the Post-Office, the Museum, the Public Library—these and other splendid buildings lend a grandiose appearance to this city of the southern hemisphere.

(i) The city is backed by the Mount Lofty Range, from which the town's water is drawn. The reservoirs in that range of hills can hold 1000 million gallons of water.

(ii) **Port Adelaide** (20) is the chief seaport in the colony. It is about seven miles from the capital.

(iii) The other noteworthy small towns are : **Gawler** (2), in a prosperous agricultural district ; **Kapunda** and **Koorunga**, once great copper-mining centres ; **Moonta**, the place richest in copper of all the districts in the colony ; **Port Augusta**, the starting-point for The Great Northern railway ; and **Wallaroo**, on St. Vincent Gulf, is noted for the export and smelting of copper.

12. "South Australia can now point to the results of half a century of colonial enterprise and labour ; to the energy, patience, and sagacity that, out of a wilderness occupied by a few wandering savages, who did not cultivate a rod of ground, have built cities and towns, established harbours, constructed eighteen hundred miles of railway and thousands of miles of macadamised roads, spanned the continent with the electric wire, raised corn in abundance for a considerable population, and shipped a large surplus to distant lands, planted orchards and vineyards, worked valuable mines that are known throughout the world, stocked the country with millions of sheep, built up a trade that in proportion to the population is hardly equalled by that of any other people, founded a commonwealth with the institutions of a free and Christian people rejoicing in their privileges, and, notwithstanding the defects and inequalities belonging to every human society, possessing the comforts, luxuries, and refinements of older and larger communities."

## NORTHERN TERRITORY

**Northern Territory** extends from the northern boundary of South Australia to the shores of the Arafura Sea, and is controlled by the Commonwealth Government. Its area is 523,000 square miles—four times as large as the United Kingdom, and it contains a mere sprinkling of white people—3310 in number. The larger part of the interior consists of a table-land rising gradually from the coast to a height of about 1700 feet, and here there are large areas of excellent pasturage. The southern part of the Territory is generally sandy with a small rainfall, but water can be produced from artesian wells. The Territory is, indeed, far from being a desert waste, as it was often considered, for in the north especially there is much well-grassed country, excellently watered by the Victoria, Adelaide, Daly, and other rivers, which are navigable by shallow-draught boats, and there are huge tracts suitable for cattle-raising and even for tillage. Portions of the country are well adapted for tropical or semi-tropical agriculture. The climate is hot and humid in the north from January to March; Darwin and neighbourhood have 63 inches of rain per annum, but the moist tropical conditions diminish further inland, where the climate becomes very dry. The Territory at present produces cattle chiefly, but there is some mining for tin and gold, and pearl-shell fishing is carried on off Melville Island. **Darwin**, on Port Darwin (one of the finest harbours in Australia), is the capital. Here the great Overland Telegraph Line ends, and from here a start has been made with the Trans-Continental railway, which will eventually be carried into South Australia.





## QUEENSLAND

BRISBANE.—LATITUDE 27° 28' S. **Kimberley, Corrientes.**

LONGITUDE 152° 56' E. Time 10.8 P.M.

1. **Introductory.**—**Queensland**, the youngest born of the great Australasian Colonies, “a land of pine and of palm,” is a vast territory which fills the whole north-eastern portion of the Australian Continent. It includes the adjacent islands in the Pacific Ocean and in the Gulf of Carpentaria. It is five and a half times larger than the United Kingdom ; it possesses a sea-board over 2500 miles in length ; and there are indentations and openings on the Pacific which provide good harbours.

(i) The area of **Queensland** is 668,497 square miles. This is more than  $5\frac{1}{2}$  times the size of the United Kingdom.

(ii) In 1859 it was cut out of New South Wales (of which it had been a part under the name of **Moreton Bay**) and made an independent state.

(iii) The population is 605,813 (1911 census). It has trebled itself within the last thirty years. There are about 12,000 aborigines, mostly in the north.

2. **Build and Rivers.**—Like New South Wales, it consists of three regions : The **Coast Lands** ; the **Table-lands** ; and the **Interior Plains**. The lower Coast Lands consist of a strip on the sea-board which varies from 50 to 200 miles in breadth. At the back of this strip comes the **Great Dividing Chain** which runs up northward as far as Cape Grafton, and which forms the watershed between the rivers that flow into the Pacific and those that fall into the Gulf of Carpentaria. “The table-land itself, especially Darling Downs, is one of the finest sheep-districts in the world.” Beyond it lies a plain which is subject to frightful droughts, and which is known as the “Never Never Country.” The most important rivers of Queensland that flow through the low coast lands are the **Burdekin** and the **Fitzroy**. The longest river that flows down the northern slope into the Gulf of Carpentaria is the **Flinders**. The chief stream flowing along the

southern slope is the **Barcoo**, which falls into Lake Eyre (in South Australia). Along the southern slope also flows the **Condamine**, one of the chief tributaries of the Darling.

(i) There are many islands along the coast. The principal are **Banks's Island**; **Frazer's Island** (in Wide Bay); **Hinchinbrook**; **Wellesley Island** (in the Gulf of Carpentaria); and the important **Thursday Island** (west of Cape York), which possesses a threefold value. It is (a) a harbour of refuge for vessels engaged in the pearl fishery; (b) an entrepôt of trade with New Guinea; and (c) a strong point of strategic vantage, as it commands the entrance to Torres Strait.

(ii) The **Fitzroy** and the **Burdekin** are the most important rivers, as they bring down large quantities of fertilising sediment.

**3. Soil.**—Every kind of soil is to be found within the limits of this extensive territory—from the rich **alluvium** of the coast-lands to the sandy and stony **deserts** of the interior south-west. The alluvial soil is rich, because it holds the fragments of decomposed volcanic rocks. On the uplands the explorer finds tracts of rich black volcanic soil in the middle of sandy regions that can grow nothing but scrub.

(i) "The volcanic element is very distinguishable and is one reason for the large area of fertile soil. Throughout the mountain-ranges which rise from many of the downs basaltic rocks and lavas abound."

(ii) "There are hundreds of well-defined but extinct craters. Some, 4000 feet above the sea-level, are surrounded by sheets of lava and masses of volcanic ashes."

(iii) The **Darling Downs** have been called the "Garden of Queensland."

(iv) Queensland is said to possess "the soils, the climates, and the features of almost every country under the British flag."

**4. Climate.**—The colony of Queensland is said to possess a large variety of climates, from the **tropical** to the **cold-temperate**. Much the larger part of it lies within the Tropics; and in this region there are only two seasons—the **wet** and the **dry**. "But the Tropics of Australia are not like the Tropics anywhere else; nor is life subject to so many restrictions and drawbacks by reason of the heat as it is in other of our possessions within the same distance of the Equator." The South-East Trades temper the climate of the hot low coast-lands; the high uplands are visited by severe frosts; and the heat, being dry, is stimulating to a degree that cannot be understood by those who know only of the moist heat of the West Indies or the sea-board of South America. The chief drawback is the unequal distribution of rain.

(i) "In the cattle stations of the interior of the far north the English immigrants are able to remain the whole day in the saddle, even in the height of summer. Boat-races are rowed at Rockhampton even in the hottest weather; and lawn-tennis and cricket are carried on throughout the colony even in the summer-time."—DILKE.

(ii) "On the whole it may be said that there is no country in the world within the same latitudes, covering so wide an area of virgin soil, both so healthful and so interesting as Queensland. There is certainly no country in the world where an Englishman can live an outdoor life in all seasons and with such entire immunity from all physical ills, unless among these are to be included mosquitoes and sand-flies."

(iii) "The most noteworthy point is the unequal distribution of rain, which seriously interferes with the agricultural, or at any rate the pastoral, capabilities of the country."

(iv) The climate has often been compared to that of Madeira; but it is drier and more stimulating. "The colony, although mainly tropical, has proved itself to be a healthy home for people of our race; and Englishmen thrive under whole months of that cruel Australian sun which has been described 'as a red-hot copper ball.'"

(v) "As Queensland extends only five degrees beyond the tropic, it of course possesses a more uniformly hot climate than the more southern settlements wholly in the temperate zone. It may, however, be doubted whether the heat is so oppressive as farther south, since Queensland is almost wholly free from the exceptional hot winds from which the other colonies suffer; while their sudden and extreme changes of temperature are equally unknown here. During a large part of the year the weather is fine, the sky cloudless, the atmosphere dry and exhilarating."

5. **Vegetation.**—The flora of Queensland is of a much more tropical character than that of New South Wales. There are many kinds of trees and plants in this country that are never seen farther south; and "the everlasting gum-tree" is not so prominent a feature in the landscape. The beautiful **Bunya-Bunya**, the **Moreton Bay pine**, and the **Moreton Bay chestnut** are among the most characteristic trees of the colony. There are many valuable trees that supply "furniture wood"—such as the **tulip-tree**, the **sandal-wood**, and the **cypress**. In the lowlands of the coast the **pine-apple** and **banana** flourish, the **sugar-cane** and the **cotton plant** thrive; and, side by side with these, the **orange** and the **vine** grow luxuriantly. **Arrowroot**, **sugar**, and **tobacco**—all of the finest kind—are cultivated. "In addition to its natural productions, there is no plant or fruit of either the Oriental or of the Occidental Tropics and the warmer temperate zone which may not be grown in Queensland." Half of the colony is covered with forests; and the almost inexhaustible wealth and resources of these forests have not been sufficiently explored. The

high downs are remarkably fertile ; and the country favoured by tropical rains is heavily timbered.

(i) There are 500 species of plants in Queensland which also belong to the Indian and Malayan regions. "The pines (*Araucarias*) take an important position among the trees of the colony ; and there are many palms in the north-east. Coast-lands are as a rule crowded with trees, some of which are 500 feet high. Queensland is, on the whole, a timber region, and possesses about 300 useful hard and soft woods. Tree ferns attain magnificent proportions."

(ii) "Sea island cotton" of the finest quality can be grown not only along the coast, but even on the interior table-lands.

(iii) "The Sour Gourd or Cream-of-Tartar tree is closely allied to the Baobab of Equatorial Africa. It has a girth out of all proportion to its height, and is one of the greatest curiosities of the vegetable world."

(iv) Not only all the vegetables and fruits found in English gardens and orchards are grown in Queensland, but also **grapes** and **oranges** ; **bananas** and **pine-apples** ; and, in addition, such plants as **tea**, **coffee**, **vanilla**, **indigo**, and many kinds of **spice**.

**6. Animals.**—The fauna of Queensland does not differ from that of New South Wales. Here, as there, the marsupials are the most prominent and most characteristic animals. The Queensland birds are celebrated for their brilliant plumage ; and among them stand out especially the **regent** and the **rifle-bird**, the **wild turkey** and the elegant **bower-bird**. **Turtles** are caught in the Gulf of Carpentaria.

(i) Some of the Queensland birds resemble those of New Guinea ; while others are like the birds of the Malay Archipelago.

(ii) The bower-birds build "play-bowers"—called "runs" by the Australians—and decorate them with gay feathers, rags, bones, pebbles, shells, and any other bright-coloured objects they can pick up. "I have seen," says Mr. Gould, "nearly half a bushel of bones, shells, etc., at each of the entrances."

**7. Minerals.**—The chief metals dug out of the ground in Queensland are **gold**, **copper**, **lead**, and **tin**. The most famous gold-mines are those of **Gympie**, **Mount Morgan**, and **Charters Towers**. There is a coal-field in the colony which is equal to half the size of England ; and the **coal** is of a high quality. Darling Downs abound in coal. There are rich **iron** ores ; but they are not worked for want of capital and labour. **Silver**, **mercury**, **zinc**, and other metals are also known to exist in many parts of the colony. Precious stones, such as small diamonds, sapphires, and garnets are picked up in "tin streams."

(i) "Gold has been found in nearly every part of the colony." "Gold-mining has long been a settled industry, with much capital invested in plant and machinery, and giving employment to a large number of miners." The total yearly yield of gold varies between a million and a million and a half sterling.

(ii) "Queensland is eminently a land of copper, . . . By far the largest deposits of copper, rivalling if not surpassing in extent and richness the celebrated mines of Lake Superior, are met with on the Cloncurry River and its neighbourhood, near the Gulf of Carpentaria."

(iii) In Central Queensland there is a great deal of good iron ore, lying close to coal and limestone.

(iv) "Queensland by the latest returns is now producing more gold than any other Australian state except Western Australia."

**8. Industries.**—Agriculture and stock-raising are the chief industries. The colony possesses about 20,000,000 sheep and 5,000,000 cattle. The large runs on the downs contain immense supplies of food for sheep, cattle, and horses. The leading grain crop is **maize**, and 25 bushels an acre is a not infrequent return, while **sugar-planting** is a growing industry. **Timber-getting** is a pursuit that is sure to grow, as the enormous wealth of the forests of the colony becomes more and more known. The colonists export not only large quantities of wool ; but also, by the aid of the freezing process, considerable quantities of beef and mutton.

(i) The greatest danger for the herds is of course the want of water. **Artesian** wells have been most successfully sunk on many of the downs and plains ; and this proves that there is a considerable subterranean supply.

(ii) The grasses are suited to the climate, and are highly nutritious ; and the "salt-bush" and other saline plants provide excellent food, while requiring little water.

(iii) Kangaroos, which eat up much of the pasture, are hunted down without remorse.

(iv) The Moreton Bay pine and the Queensland cedar grow in large quantities ; and the eucalyptus-trees provide immense supplies of hard wood.

**9. Commerce.**—The trade of Queensland is done chiefly with the other Australasian Colonies, and next with the United Kingdom. The most valuable exports are **wool, gold, meat** (preserved, frozen, and extract), **sugar** and **live stock**. Then come **hides** and **tallow**, **tin**, **copper**, **timber**, **green fruit**, and **pearl-shell**. The leading imports are **textiles** and **clothes** ; **metal goods** ; and **food** and **drink** of various kinds. The total annual trade done amounts to over £16,000,000.

(i) A large fleet of vessels is engaged in the pearl-shell, bêche-de-mer, oyster, turtle, and dugong fisheries. **Thursday Island** and the **Great Barrier Reef** are the chief fishing-grounds. The bêche-de-mer or sea-slugs go dried to China, as the Chinese regard them as a great delicacy for soup.

(ii) The relative values of the pastoral, mineral, and agricultural exports are as 9, 4, and 2 respectively.

**10. Communications.**—There are over 4600 miles of railway in Queensland. The lines run inland from the coast and are not connected with each other. Brisbane, the capital, has, however, railway connection with the New South Wales system.

From Brisbane a line runs north-west to the artesian wells of Charleville on the Warrego. A second line joins the port of Rockhampton to the Thompson river; and a third line extends from Townsville, through Charters Towers gold-fields, to Hughenden, whence it branches to Winton and to Cloncurry. A fourth line runs along the coast from Brisbane to Rockhampton, by way of Gympie, Maryborough, and Bundaberg.

**11. Towns.**—Brisbane, the capital, is by far the largest town. Besides Brisbane the most important coastal towns are **Rockhampton**, **Maryborough**, and **Townsville**. The chief inland towns are **Toowoomba**, **Ipswich**, **Charters Towers**, and **Gympie**—the last three all mining centres.

(i) **Brisbane** (141) stands twenty miles up the Brisbane river, which is only kept open for ocean-going vessels by constant dredging. It has the rich pastoral and agricultural lands of the Darling Downs behind it, and likewise the coal-mines of Ipswich. On the Downs themselves stands **Toowoomba** (24), which is a depot for wool, and round which are grown wheat, grapes and fruit.

(ii) Brisbane does not monopolise the export trade of Queensland as do Sydney, Melbourne, and Adelaide elsewhere. **Rockhampton** (20) is the port of Central Queensland and exports wool and other pastoral produce. Near it is **Mount Morgan**, one of the richest gold-mines in the world. **Maryborough** (12) lies behind the shelter of Sandy Island. It exports sugar and oranges, and has many foundries, saw- and sugar-mills. **Townsville** (15) is the principal shipping-port of Northern Queensland. It exports the gold of Charters Towers, wool, meat, tallow, etc.

(iii) **Ipswich** (18) is the centre of the chief coal-mines of Queensland; and, owing to its coal, it has manufactures of wool and cotton. **Gympie** (15) stands on a gold-field, on the railway between Brisbane and Maryborough. **Charters Towers** (20), in Northern Queensland, stands on the premier gold-field of Queensland. It is situated on the Burdakin river.



### THE CONDITION OF QUEENSLAND

1. **Area** . . . . . 668,497 square miles

This is more than three times as large as France.

2. **Population** (1911 census) . . . . . 605,813

3. **Total Trade** (1912) . . . . . £16,666,000

(i) Of this total about £9,000,000 were for **exports**, and £7,000,000 for **imports**.

(ii) Wool is the leading export, as with most of the Commonwealth states.

4. **Communications, etc.** . . . . . Sufficient

(i) In 1912 there were 4633 miles of railway open.

(ii) There are lines of steamers from Brisbane to all parts of the world, and the numerous small ports encourage a coasting-trade.

(iii) The chief manufacture is that of sugar-milling.

### THE CONDITION OF WEST AUSTRALIA

1. **Area** . . . . . 975,920 square mile

This is nearly eleven times the size of Great Britain.

2. **Population** (1911 census) . . . . . 282,114

3. **Total Trade** (1912) . . . . . £12,958,000

(i) Of this total £5·3 millions were for imports, and £7·6 millions for exports.

(ii) **Gold** and specie was the leading export; then came wool, timber, pearl-shell, and pearls.

4. **Communications, etc.** . . . . . Fair and increasing

(i) In 1912 there were 3430 miles of railway. The principal lines radiate from **Perth** inland and along the coast.

(ii) The great mail-steamers call at **Fremantle**, which is connected with the capital, **Perth**, by railway.

## WEST AUSTRALIA

PERTH (WEST AUSTRALIA)—LATITUDE 32° 0' S.

Sydney and Cape Town, about ; Valparaíso, Santiago (Chili).

LONGITUDE 116° 0' E. Time 7.43 P.M.

1. **Introductory.**—West Australia is that part of the continent which lies to the west of 129° east longitude. Its area is estimated at 975,920 square miles, or nearly eleven times the size of Great Britain. But much of it is as yet unexplored ; and a great deal of it is believed to be desert. The population of the whole colony is now 282,000—rather less than the population of Bradford.

(i) West Australia was formerly known as the **Swan River Settlement**.

(ii) “Founded in 1829, and therefore eighty-six years old, **West Australia** has until lately made but slow progress. She has been the Cinderella of the Australian family ; while her more fortunate sisters have got on in the world, have been gay and prosperous, and have received much company in the shape of immigrants, she has led a solitary and unnoticed existence. . . . This colony I hold to be one of the few remaining parts of the British Empire in which there is still ample, almost boundless, scope for enterprise and settlement. —NAPIER-BROOME.

(iii) “The Western part of the continent of Australia is as yet only a land of stones and flowers, and the greater portion of the remainder—to the unaccustomed eye a kind of desert—almost mountainless, and consequently almost without permanent rivers. In its thirstiest parts, however, enterprising colonists have gradually found that water can be stored and that sheep can live.”

(iv) The two things that have retarded the growth of West Australia are : (a) The fact that the patches of fertile land are separated from each other by wide stretches of desert ; and (b) the long distances from the two best seaports—**Albany**, on King George’s Sound, and **Fremantle**.

2. **Build of the Country.**—The surface of West Australia is monotonous. Ranges of low hills run along the west coast ; the hills in the north rise to a greater height—from 2500 feet to 4000 feet ; but, at the back of these ranges, little but desert—wastes of sand or of stone, can be discovered. The western seaboard is heavily timbered ; and in the north and north-west—far within the Tropic of Capricorn—are large tracts of rich land, which

are well fitted for the cultivation of sugar, coffee, rice, and other tropical productions. The western and northern sea-boards are well watered by streams, which make their way through the numerous openings that occur in the coast-ranges down to the ocean; but many of them are mere "wadies"—channels for the conveyance of floods and waterspouts which burst in the hilly districts. A long series of small islands, with coral reefs, lines the coast.

(i) "Along the river-courses of the north and north-east of the colony are about 20,000,000 acres of fairly well-watered country, affording good pasturage."

(ii) In the **Stirling Range**, on the south coast, **Ellen's Peak** rises to the height of 3400 feet. In the **Darling Range**, on the west coast, **Mount William** attains an altitude of 3000 feet. **Mount Bruce**, near the north coast, is 3600 feet high.

(iii) The best known rivers are: the **Blackwood**, which falls into the sea near Cape Leeuwin; the **Swan**, on which Perth stands; the **Gascoyne**, which flows into Shark Bay; and the **Fitzroy**, which falls into King Sound.

**3. Climate.**—The climate of the southern portion of this colony is one of the finest and healthiest in the world. The summer is like a warm dry summer in the south of England or in France; and the winter is like a pleasant English autumn. The northern portion, on the other hand, lies within the tropics, and has therefore a tropical climate. But it is dry and it is bracing; and the heat is tempered by cooling breezes from the high seas. The climate of the middle portion is like that of the south of Italy.

(i) The **rainfall** over most of the interior of the country is very small. Only the seaboard receives a fair supply of rain, and the south-west corner is the wettest portion.

(ii) "The annual rainfall varies from 33 in. at Perth to 21 in. in Kimberley, 10 in. in the north-west, and 9 in. in the Coolgardie district, and from 37 in. at Augusta in the south-west to practically nothing in parts of the far interior."—**CARNEGIE**.

(iii) "The climate of West Australia is generally admitted to be one of the finest known. It is very dry, though with a rainfall of about 30 inches annually, and the heat is rarely oppressive. The sterility of the country generally, and the prevalence of sand, is highly favourable to health, as there is little luxuriant vegetation to produce miasma by its decomposition, and hardly any morasses or damp lowlands to breed ague and fever. The mortality of the whole colony is said to have averaged only one per cent. since its formation, that of Great Britain being about two and a half per cent.

**4. Products.**—The wealth of the colony consists chiefly of **gold**, **wool**, and **timber**, and they are its principal exports. The most

important goldfields are those of (a) **Coolgardie**, **Kalgurli**, and **Boulder**, 400 miles east of Perth—by far the richest of all; Murchison and Cue, in the Murchison River basin; (c) **Pilbarra** round the De Grey River; and the **Kimberley** district in the north. The live-stock consists of about 800,000 cattle and over 4,000,000 sheep. The best stock-raising districts are in the river valleys of the west and north-west. Timber-getting is confined to the south-west corner, which receives the most rain. Enough coal is mined to supply the local railway requirements.

(i) The exports also include some tin and copper, pearls and pearl-shell, sandal-wood, and kangaroo hides.

(ii) Gold is by far the most important product of West Australia. In 1911, £1,193,406 worth was exported, and busy mining-towns have sprung up on what was a very few years ago a dreary uninhabited desert. West Australia is now the largest gold-producing state in Australia.

(iii) The annual export of wool amounts to something over £1,000,000.

(iv) The two most important timber-trees are the **karri** and the **jarrah**—both species of eucalyptus. The jarrah resists the attacks of the ship-worm (*teredo navalis*), and is hence in request for harbour-works. Both it and the karri make also very good railway sleepers and wood-pavement.

**5. Towns and Communications.**—The only portion of West Australia that is at all thickly settled lies along the west coast between **Geraldton** and **Albany** (King George's Sound). Here are grown various sorts of cereals, the vine, and excellent fruits, such as oranges, lemons, and peaches. The largest towns are **Perth**, the capital, **Fremantle**, **Albany**, **Geraldton**, **Coolgardie**, **Kalgurli**, and **Boulder**. All are joined by railway, of which the colony possesses some 3400 miles.

(i) **Perth** (84) stands some ten miles up the Swan river. Its port is **Fremantle** (25), lower down the river, where the mail-steamers touch. The only other important harbour is **Albany** (3), in King George's Sound, the old port of call for the mail-steamers. It is a naval coaling station.

(ii) **Geraldton** is the outlet for the mineral and pastoral resources of the **Murchison** district. A railway runs from Geraldton to the gold-mining town of **Cue**—300 miles inland.

(iii) The gold-mining towns of **Coolgardie** (2) and **Kalgurli** (8) lie on the railway some 400 miles east of Perth. Close by is **Boulder**, also the centre of an extremely rich gold-mining area. Within the memory of middle-aged men the sites of these three towns were a part of the silent bush, and now they can boast substantial buildings, stock exchanges, electric light, the telegraph, and the railway. **York** and **Northam**, on the railway a little east of Perth, are noted farming centres.

## THE CONDITION OF THE COMMONWEALTH OF AUSTRALIA

**1. Area** . . . . . 3,063,041 square miles

Europe amounts to about 3,700,000 square miles.

**2. Population (1911 census)** . . . . . 4,805,005

This is less than 1 person to the square mile. England (in 1911) had 619 persons to the square mile.

**3. Exports (1912)** . . . . . £79,096,090

(i) Wool (£26 m.) is infinitely the most valuable export of the Commonwealth.

(ii) Apart from exports of metals (gold the chief of all), the Australian export trade is specially a *food-trade*. For after wool the chief exports (excluding metals) are wheat, skins and hides, butter, tallow, meat, and flour.

**4. Imports (1912)** . . . . . £78,158,600

(i) Apparel and textiles are the chief imports, and after them come metal manufactures, iron and steel, and machinery.

(ii) The total trade of 1912 amounted to £35·8 per head.

**5. Trade with the United Kingdom (1912)** . . . £77,434,000

Of this total £45·9 millions were for imports from the United Kingdom, and £31·4 for exports to the United Kingdom. Hence as the total of the Commonwealth's trade was in 1912 £157·2 millions, the United Kingdom absorbed practically half.

**6. Communications (inland)** . . . . . Fair

(i) The Commonwealth possessed in 1912 18,653 miles of railway. In the same year the United Kingdom possessed 23,441 miles.

(ii) There were in 1912 101,000 miles of telegraph wire, and the post offices dealt with 700,000,000 letters, etc., which gives an average of 145 letters, etc., per head of population.

**7. Communications (external)** . . . . . Excellent

(i) The five mainland ports are well served by some of the best steamship lines afloat.

(ii) In 1912 2035 vessels entered the Commonwealth ports with a tonnage of 5,163,857 tons. Of these vessels 1399 flew the British flag with a tonnage of 3,778,322. Under foreign flags 324 vessels entered.

## TASMANIA

HOBART.—LATITUDE  $42^{\circ} 50' \text{ S.}$

Christchurch and Wellington (New Zealand).

LONGITUDE  $147^{\circ} 17' \text{ E.}$  Time 9.50 P.M.

1. **Introductory.**—The colony of **Tasmania** is a heart-shaped island which is as large as Scotland without its attendant islands. It has a long and irregular coast-line, with many good harbours. It is perhaps the most thoroughly mountainous island on the globe, and has been called “the Switzerland of the South.” A high table-land fills the middle of the island; and on and round this rise mountain-ranges and peaks, and from it run down four slopes. Mountain, table-land, valley, ravine, and glen are mingled in the most picturesque confusion. The two largest valleys—those of the **Derwent** and the **Tamar**—run south and north. There are many other smaller rivers, which never fail for want of water, which flow through picturesque scenery and magnificent forests, and are adorned with splendid waterfalls. There are numerous alpine lakes on the central table-land—the highest being **Great Lake** and **Lake St. Clair**. The population of the whole island is only about 191,000.

(i) “The insular colony of Tasmania is in many respects the most interesting, as it is certainly the most beautiful portion of Australia.” . . . “Situated to the south of the most southern portion of Australia, from which it is separated by a strait 150 miles wide, Tasmania is far more temperate and equable in climate than any part of the mainland. It lies between  $40^{\circ} 40'$  and  $43^{\circ} 38'$  south latitude, and is about 200 miles long, and a little less in width, having the form of a semi-ellipse or heart; the base, which is somewhat hollowed out, to the north, and the vertex to the south, where the coast is more irregular. Its western extremity is nearly due south of Geelong, in Victoria, from which it is distant about 180 miles. Its area is about 24,500 square miles, and its numerous dependent islands amount to an additional 1715 square miles. Although the outline of Tasmania is generally even and well defined, it is broken up in detail, so as to afford many bays and inlets, and a number of good harbours.”

(ii) The highest mountains, which just exceed 5000 ft., are **Cradle Mountain** in the west, and **Ben Lomond** in the east. They are snow-capped for part of the year.



(iii) "The scenery of the island is thoroughly English, and reminds one of the finest parts of Kent and Surrey." . . . "There are lanes here," says Mr. James Smith, "than which I know of nothing more thoroughly English in the pages of Miss Mitford, or on the canvas of Gainsborough, Constable, or Creswick, or in the beautiful county of Kent itself. All the elements of the picturesque are there—the lofty hedgerows white with blossom in the spring, and crimson with berries in the autumn; the luxuriant foliage, the winding lane, the sweet breath of the new-mown hay, the sweep of the scythe through the long grass, and the rustic bridge spanning a brawling brook; the hop-gardens with their long-drawn aisles of vivid green, the delicate curves and spiral movements of the graceful vine, the sunshine dropping in golden rifts, and the shadows falling in dark brown lines—all hint of good old Saxon Kent." . . . "Amid all this English outlook the new-comer is reminded that he is not at home by the appearance of gaudily-coloured parrots and other birds unknown in the mother-country."

"It is England all over. Everywhere you descry lovely country houses, with all the earthly blessings of fine gardens well walled in, with their conservatories and forcing-houses, their extensive shrubberies, verdant parks and lawns, fields in pasture or under plough, and woods sloping down solemnly from the hills, with a very tempting aspect. Many of these hills are remarkably steep, yet so rich and smooth are they, that the farmers have ploughed them to their very summits, and grow splendid crops of corn where you would hardly have supposed that a team could have maintained its footing."

(iv) "The interior of **Tasmania** presents a diversified aspect—high ranges of hills, isolated peaks of the most fantastic shapes which overhang profound and tortuous abysses; and these alternate with beautiful valleys and wide-spread plains. The southern and western parts of the island are remarkable for bold and commanding scenery. Tasmania shows itself to be a truly alpine region by the possession of numerous mountain lakes near the sources of its rivers. Most of these are very deep, situated in rock-basins, and owing their origin to the same causes which have produced the beautiful lakes of the European Alps, of Scotland, Cumberland, Wales, and other mountainous countries in the temperate zone." . . . "Fine peaks, rocky precipices, rushing streams, and foaming cataracts, alternate with fertile plains and valleys, or grassy uplands."

(v) "The coast, which is rocky and bold in outline, is broken by numerous inlets, which form good natural harbours." . . . "In the south there is an almost uninterrupted series of anchorages, which for shelter, bottom, and depth, are scarcely surpassed in any other part of the world."

(vi) The aborigines of the island are entirely extinct.

**2. Climate.**—There are in Tasmania two well-marked climates—the climate of the east and the climate of the west. The former is very dry; the latter rather wet. It is said to be the healthiest of all the Australasian colonies. It is cooler than the mainland of Australia; and the air is much more bracing. Hot winds from the mainland rarely come; and, when they do come, their stay is short. The climate is well known to be favourable to long life.

(i) Invalids from Australia crowd the hotels of Hobart in the summer months of January and February. "The climate of Tasmania has many advantages over that of any other part of Australia, and it is hence termed the sanatorium of the south." "There is abundance of wind, often violent, but thunderstorms are rare. The atmosphere is rich in ozone, and epidemic diseases are almost unknown. The climate of Tasmania is highly favourable to infant life, and it is especially restorative to enfeebled constitutions from warmer countries."

(ii) The mean summer temperature is 62°: the winter, 47°. "It possesses the full summer heat due to its latitude, and even some excess, for it feels the hot northern winds from the Australian plains; but, however hot the days may be, the nights are always cool and refreshing, owing to the proximity of lofty mountains and the cool Antarctic seas."

(iii) The average rainfall is about 24 inches;—and this is about the minimum in Great Britain.

**3. Flora and Fauna.**—Tasmania is the "garden of Australia"; and the whole island is deservedly famous for its flowers, its fruits, and its timber. "The **apples** and **pears** far surpass those of Great Britain in size and appearance; and there are more than 130 varieties in cultivation." Thousands of bushels of apples are annually sent to England; and, as our winter is the Tasmanian summer, these cargoes of fruit come at the right time, just when London and the other cities of England are most deficient in fruit-supplies. The chief forest-trees are, as on the mainland, the **eucalypti**; and some of them grow to a height of over 300 ft. The **blackwood**, the **pine**, **myrtle**, and **snake-wood** are all excellently suited for the making of furniture.—Among the fauna of Tasmania the most remarkable are the two "carnivorous marsupials"—the tiger-wolf and the "Tasmanian devil." These are peculiar to this island. The duck-billed **platypus** is abundant in the fresh waters of the colony; and the **wallaby**, **wombat**, and **opossum** are hunted for their skins. There are 150 species of birds; and of these, fifteen are peculiar to Tasmania.

(i) "The special production of Tasmania is fruit, and for this its climate is so favourable that it could supply all Australia with preserves if it had cheap sugar and open markets, but the colonial tariffs prevent this. . . . The pears excel even those of Jersey; and a single pear has been known to weigh over 3½ lbs."

(ii) One pear-tree at Launceston is 86 ft. high, 3 ft. in diameter; and it produced 50 bushels of fruit in one single season.

(iii) "In every sheltered valley the settler has his raspberry plot and his black currant plot; once planted, they need little attention."

(iv) "The forests abound with valuable timbers, the blue gum often reaching a height of more than 300 feet, while the celebrated Huon pine is a most valuable timber

for shipbuilding. In the district of New Norfolk there is a tree, the trunk of which has been burnt hollow, and affords an apartment 20 ft. long in which picnic parties are held."

(v) The evergreen forests are delightfully aromatic. The red flowers of the tulip-tree are visible from a great distance on the mountain-sides.

(vi) "Tasmania and the southern colonies of Australia are not so rich in butterflies as Great Britain, but beetles are very abundant and varied, and are not surpassed in any other temperate country for numbers and beauty."

4. **Products.**—The principal products are **fruit, wool, and minerals**. The four most important minerals are tin, copper, silver, and gold. Oats and wheat are the chief crops raised for domestic consumption; fruit and hops are largely grown for export. There are about 2 million sheep, chiefly of the merino breed.

(i) Gold is found round the banks of the river **Tamar**; silver near **Mount Zeehan** in the west. Tin is extremely rich and abundant at **Mount Bischoff** in the north-west, and at **Branxholme** in the north-east. There are valuable deposits of copper at **Mount Lyell**.

(ii) Iron ore exists in abundance. Coal also is widely distributed, and the coal-mines of the Fingal basin in the east supply the railways of the colony.

(iii) Agriculture is greatly assisted by the equable climate, and by the amount of sunshine and daylight. On the shortest day of the year the farmer can plough from 8 A.M. to 5 P.M.

5. **Commerce.**—The exports of the State amount to about half a million sterling; and the imports to about a million. The most valuable exports are tin, wool, silver, copper, gold, fruit (green and preserved). The chief import consists of textiles. The neighbouring State of **Victoria** sends most of the imports, and it is through Victoria, too, that a considerable proportion of Tasmanian exports go out. Thus it is that the Tasmanian export trade appears small, Victoria being credited with many exports that really belong to Tasmania.

(i) The value of the minerals produced in 1911 was—tin £543,000; silver £309,000; gold £161,000; and copper £440,000. Iron-ore exists, and coal of a good quality is generally distributed over the island.

(ii) The export of Tasmanian fruit averages just over £300,000, and of the wool about £250,000.

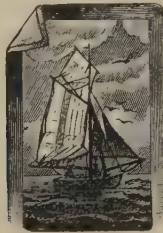
(iii) The chief imports sent by Great Britain are clothing, iron goods, cottons, and woollens.

6. **Towns and Communications.**—There are only two towns of any importance: **Hobart** (39), the capital and port of the south; and **Launceston** (24), the port of the north. There are over 700 miles of railway in the colony; and nearly 2000 miles of telegraph line. Good highroads have always existed in the colony; the material was abundant and the convict labour was “cheap.”

(i) **Launceston** and **Hobart** are connected by railway. Another line runs from **Emu Bay** to **Waratah** in the north-west to tap the mines of **Mount Bischoff**. Coaches connect the inland townships. The mountainous character of the island makes railway construction difficult.

(ii) **Launceston** is the chief seat of export for the mineral wealth of the colony.

(iii) “With a splendid soil to allure the farmer; with magnificent prospects for the miner; with promising industries yet undeveloped; with a climate and people second to none in the world, and physical beauties that few countries can rival—Tasmania should have a great future in front of her. Strong in the girdle of water that nature has placed around her, she is peculiarly strong also in the possession of a harbour that should become, in the course of time, the centre of the maritime system of this southern region. **Hobart** is that harbour. It is easily approached by friendly vessels; it is easily defended against unfriendly ones. It has a scope and a depth that would accommodate any fleet likely to be sent there; it possesses the recommendation of being favourably situated as regards a coal supply; and it has a climate peculiarly adapted to the requirements of British seamen. Whether from a strategical, economical, or sanitary point of view, it may be claimed for **Hobart** that it is *the* harbour of the South.



## THE CONDITION OF TASMANIA

1. **Area** . . . . . 26,215 square miles

This is as large as the mainland of Scotland.

2. **Population** (1911 census) . . . . . 191,211

(i) Of this population about half are natives born in Tasmania.

(ii) The aborigines of Tasmania are entirely extinct.

(iii) The largest town, **Hobart**, has only 38,000 inhabitants.

3. **Exports** (1912) . . . . . £499,894

The chief exports are **minerals**, **wool**, and **fruit**.

4. **Imports** . . . . . £1,009,198

The chief imports are textiles and food and drinks.

5. **Manufactures** . . . . . Small

Hobart has some jam-factories, flour- and woollen-mills, and iron-works that produce machinery and materials for railway and bridge-building.

6. **Communications (internal)** . . . . . Fair

(i) There are over 700 miles of **railway**.

(ii) The main line connects Hobart and Launceston, the chief ports at either end of the island.

(iii) There are nearly 2000 miles of **telegraph line** (with over 3000 miles of wire)

(iv) Hobart and Launceston are connected also by **telephone**.

7. **Communications (external)** . . . . . Sufficient

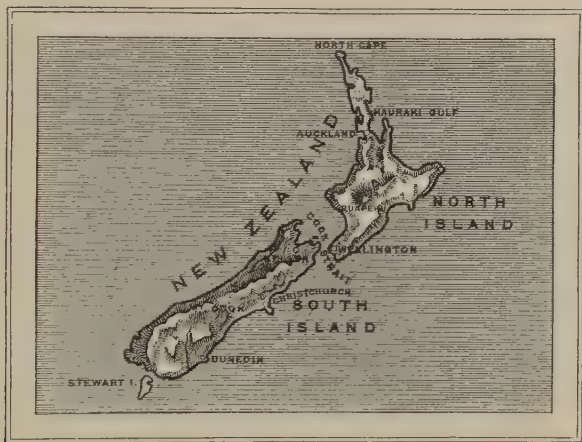
There are lines of steamers to Melbourne, as also a submarine cable from Launceston.

## NEW ZEALAND

WELLINGTON.—LATITUDE  $41^{\circ} 16' S$ . Chiloe Island, Valdivia, about.

LONGITUDE  $174^{\circ} 48' E$ . Time 11.39 P.M.

1. **Introductory.**—The group of islands which lie between  $34^{\circ}$  and  $47^{\circ}$  S. lat.—entirely in the Temperate Zone, about 1200 miles from Australia, is called **New Zealand**. This group, which is of volcanic origin, consists of two large islands—**North Island** and **South**



Island, and one very small one—**Stewart Island**. The two larger islands are together a little more than twice the size of England without Wales. Their surface is highly mountainous ; and one long cordillera runs through both islands from south to north. The islands are well watered ; and there are almost innumerable rivers and lakes. The total length of the islands is 1100 miles, and the broadest part is 250 miles. The coast-line is over 3000 miles long ; and there are many good harbours. The South Island is remarkable for long narrow fiords called “Sounds,” with high steep cliffs hemming them



in. The population of the three islands amounts to 1,005,838. The Maoris number 49,844, and the Chinese immigrants 2630.

(i) The North and South Islands are separated by **Cook Strait**; South Island is separated from Stewart Island by **Foveaux (Fov̄) Strait**.

(ii) **North Island** has an area of 45,000 square miles; **South Island** about 58,000.

(iii) The most populous district is Wellington; but it has only 7 persons to the square mile.

(iv) Many parts of New Zealand remind one of the romantic scenery of Scotland. A New Zealander, after seeing Scotland, will say: "There is no place in the world like Scotland, except New Zealand." And a Scotchman says: "There is no place in the world like New Zealand, except Scotland."

(v) "In New Zealand everything is English. The scenery, the colour and general appearance of the waters, and the shape of the hills are very like that with which we are familiar in the west of Ireland and the highlands of Scotland. The mountains are brown and sharp and serrated; the rivers are bright and rapid; and the lakes are deep and blue, and bosomed among the mountains. If a long-sleeping Briton could be set down among the Otago hills, and told on awakening that he was travelling in Galway, or in the west of Scotland, he might be easily deceived, though he knew those countries well."—ANTHONY TROLLOPE.

(vi) "New Zealand is often called 'The Britain of the South'; but it much more resembles Italy in latitude, shape, climate, and natural conditions generally. If Italy were insular and surrounded by vast tracts of water, the resemblance would be complete."

2. **Build.**—Both islands are mountainous, and even rugged, with narrow plains on the west, and broader plains on the east side. The South Island is the more mountainous of the two; and the lofty range runs very near to the western coast. The mountain-range in this island is called the **Southern Alps**; and the highest point in it is **Mount Cook**, which attains the height of 13,200 ft. It is called by the Maories *Aorangi* (=The Cloud-piercer). It is the highest summit in the whole of New Zealand—a little lower than that of Mont Blanc. The glaciers of these New Zealand Alps surpass in size even those of the Alps of Switzerland; and some of them come down to within 750 ft. of the level of the sea.—The highest mountains in the North Island lie nearer to the eastern coast, and are all volcanic. The loftiest peak in that island is **Mount Egmont** (8270 ft.). It forms a most striking object for many miles inland, and also far out at sea.—The largest lake in New Zealand is **Lake Taupo** (in North Island); and the largest river is **Waikato**, which is the outlet of Lake Taupo. The widest plain is that on the eastern side of the South Island,—and is

called **Canterbury Plains**.—Evidences of volcanic action—past or present—abound almost everywhere in New Zealand, more especially in the centre of the North Island.

(i) The Southern Alps rise above the line of perpetual snow; and their higher valleys are filled with large glaciers, the lower with beautiful lakes.

(ii) **Mount Egmont** (8270 ft.) is a regularly shaped, snow-topped, volcanic cone which stands by itself in the south-west corner of the North Island, and rises “in solitary grandeur.” “By far the most remarkable and imposing extinct volcano in New Zealand is the superb Egmont, which forms a distant background to the town of New Plymouth, the capital of the fertile province of Taranaki, on the west coast of North Island.”

(iii) In the centre of the North Island lies an elevated plateau. From this plateau rise two lofty volcanoes—both active, the former in a state of intermittent activity—**Ruapehu** and **Tongariro**. **Tongariro** (6500 ft.) constantly sends out smoke.

(iv) **Lake Taupo** is a “veritable inland sea,” about six times the size of Loch Lomond, with dark blue waters, and of an unknown depth. It is said to be the old crater of an extinct volcano. It is surrounded by volcanic deposits which form a table-land rising 1000 ft. above its surface. “Taupo, the largest lake in the North Island, is a veritable inland sea, 25 miles long and 20 wide, and of an enormous depth, which has not yet been ascertained. On the western side the lake is bounded by vertical precipices 1000 ft. high, and here the water is believed to be deepest. Its colour is a dark blue, like that of the deep ocean, and from its centre rises a small but very beautiful island.”

(v) The **Waikato**, about 25 miles from its outlet, passes through a most striking group of hot springs. “Along its banks white clouds of steam ascend from hot cascades falling into the river, and from basins of boiling water shut in by white masses of stone. Steaming fountains rise at short intervals, sometimes two or more playing simultaneously.”—The active volcano of **Tongariro** rises a few miles off. —Farther north is a zone of hot springs, solfataras, fumaroles, and mud volcanoes, more than a thousand in number. There is nothing like it anywhere else in the world.—The **Molyneux** or **Clutha** is the largest river in the South Island.

(vi) The **Lake District**, which lies north-east of Lake Taupo, is, in its own fashion, the most remarkable region on the globe. It is famous for its wonderful collection of geysers, sulphurous springs, palatial terraces, lovely natural baths, edged with flinty deposits which look like tinted marble—pink or white, and filled with hot transparent water of the clearest and strongest blue. The pure white of the flinty deposits, the intense blue of the waters, the vivid green of the surrounding vegetation, the bright red of the bare earth, the whirling clouds of steam—all go to form a scene which is unequalled on the face of the globe. (The pink and white terraces, destroyed in 1886 by the eruption of a neighbouring volcano, are beginning to form again.)

(vii) “The steel sand of New Zealand, which is found in inexhaustible quantities on the sea-shore, appears to be almost pure steel, reduced by some natural process to a fineness about equal to that of ordinary sea-sand. A magnet takes up as much of it as it has force enough to hold.”

3. **Climate.**—The climate of New Zealand is like that of England—only warmer and more equable. The extremes of temperature are not nearly so great as in the British Islands. The sea-breezes temper the summer heat, and add warmth to the air in winter. The prevalent winds are westerly, cross a great breadth of ocean, and are laden with moisture; hence the west coasts are much more rainy than the east. But, as the islands stretch through about 13 degrees of latitude, there are indeed several climates within their limits. There are three climates pretty plainly marked—those of the north, the middle, and the south. The northern climate—that of **Auckland**—may be compared with that of southern or peninsular Italy; the middle climate—that of **Wellington**—with the climate of Milan—of northern or continental Italy; and the southern climate—that of **Dunedin**—with that of London or the south of England. But everywhere the atmosphere is dry and elastic; not moist and heavy as in Great Britain. Every wind that blows has crossed thousands of miles of ocean, and comes laden with ozone for the lungs of the inhabitants.

(i) “It is happy for the Australians that they can visit the perpetual snows, and stand sometimes by the rushing, murderous torrent rivers of New Zealand, usually half lost in their gigantic stony beds. They find something there to dream of when they return to their native creeks—beds of small rivers, consisting of mere baked mud—and swelter through the still heat of their long dry days, watching the mirage through the fierce yet healthy heat of their burnt-up plains.”

(ii) “New Zealand scenery, with that of Japan, is the most beautiful of the temperate world. The one drawback to living in the loveliest parts of New Zealand is the drawback to Japan—the wind. The west coast of the South Island of New Zealand is unequalled in the combination of jungle with low glacier.”

(iii) “New Zealand never suffers from drought. Its natural formation and its situation effectually prevent that. In seasons when the drought is most cruel in Australia, in fact, New Zealand is at its prime; the unbroken weather of a dry summer bringing to perfection the crops which have been well nourished by the unfailing rains of winter and spring.”

4. **Flora and Fauna.**—The timber belongs chiefly to the tribe of pines; and the **Kauri pine** is the most valuable tree in the islands. There are no native grains or fruits; and those now cultivated were introduced by the settlers. The climate is favourable to fruit; and **oranges, lemons, and citrons** grow even in the comparatively cool climate of Wellington; while **peaches, apricots, figs, pears, and melons**

grow profusely almost everywhere. "The **hop** thrives with unexampled luxuriance." The fauna of New Zealand is very peculiar: there are no marsupials at all; and the most peculiar native bird is a wingless running bird called the **apteryx**. There are about 133 species of native birds; 73 species being land birds. Wild ducks, pigeons, hawks, parrots, and landrails are common.

(i) Forests, covering about 12,000,000 acres, are a characteristic feature in New Zealand. Kauri gum, a product of the Kauri pine, used for fine varnishes, is found in the soil on the sites of old Kauri forests, and at the foot of growing trees. The Kauri pine itself supplies excellent timber. "The lower slopes of the mountains are covered with fine trees and with the luxuriant and evergreen tree-ferns (some of which are 30 ft. high), together with the beautiful undergrowths of the New Zealand forest."

Acacias and eucalypti do not grow wild in New Zealand as they do in Australia.

(ii) "In the North Island, oranges, lemons, peaches, grapes, figs, and melons thrive luxuriantly; while in the South Island some of these, as well as every out-of-door English fruit, arrive at perfection."

(iii) "The great characteristics of New Zealand scenery, as dependent on vegetation, are the forests, the ferns, and the grassy plains. The forests chiefly clothe the mountain-ranges; the lower hills are covered with fern; while extensive tracts, chiefly on the west in the North Island, and on the east in the South, are covered with grass and bushes. But generally the forests are much intermixed, and their chief distinctive feature is the abundance and variety of the ferns that grow beneath their shade. Here are splendid tree-ferns 30 or 40 ft. high, equalling those of the tropics; exquisitely beautiful filmy-ferns growing on trunks of trees; while rocks, and shady banks, and often the whole surface of the ground, are covered with them in great variety. There are about 130 different kinds of ferns."

(iv) "The New Zealand forest presents little of the gorgeous splendour of the tropics. It is always cool and sober. There is none of that riotous, reeling profusion of colour which makes the sylvan scenery of Central America or the Pacific Islands resemble a vast kaleidoscope. A great proportion of the flowers are almost colourless, white or green, or white and green, or pale yellow." "But there is hardly any part of New Zealand where ferns are not to be found in greater or less profusion, and some of the commonest sorts are the most magnificent. The tree-ferns, with a rough black stem and a feathery crest of fronds, reach a height of thirty or forty feet, and are exceedingly abundant."

(v) The only native mammals are two small kinds of bats.—There are no snakes.—There are four kinds of apteryx—without wings or tail-feathers, and a little larger than a hen. They have short legs, bills like a snipe's, and long brown hair-like feathers.

(vi) The colony is very rich in the fossils of birds. One extinct species is the **Moa**—a gigantic bird 14 ft. high. (The natives affirm that some individuals still exist in the inaccessible forests of the interior.) "Most remarkable of all the birds of New Zealand is the 'Kiwī' or Apterix, of which there are three or four species in the two larger islands. These are totally wingless and tailless birds, with feathers resembling hairs, and altogether unlike our usual idea of a bird. . . . But the existing Kiwis are only the

last survivors of a race of wingless birds of various sizes, the largest exceeding in bulk and height the largest living ostrich." "The country is becoming rapidly stocked with hares, pheasants, grouse, quail, etc."

**5. Industries and Commerce.**—Two-thirds of the surface of New Zealand is suitable for agriculture and grazing. The chief industries are **sheep-farming, agriculture, and mining.** By far the largest exports are **wool and frozen meat**; then come **gold, butter, cheese, tallow, Kauri gum, and hides.** Much the largest trade is done with Great Britain (the exports and imports to and from Britain amount to about £29,000,000), because what Britain wants is raw material and food; the Australian Colonies have also considerable commercial dealings with New Zealand. "New Zealand bids fair, in the not far distant future, to be a great commercial centre in the southern seas."

\* Not only grain and breadstuffs, but potatoes, hay, chaff, roots, vegetables, butter, cheese, bacon, hams, even meat and fish, preserved or frozen, are sent over in immense quantities and eagerly bought at Sydney, Brisbane, and Melbourne, at highly remunerative prices. This trade is steadily growing, and there cannot be a doubt that in time a great part of Australia will be supplied with food staples from New Zealand."

(i) The total imports amount to about £21,000,000 a year; the exports to about £21,700,000.

(ii) The colony owns about 23,000,000 sheep. "The whole of the wool goes to London, whence about two-fifths of it is re-exported to France, Belgium, and America. Much of the best wool used in the carpet factories abroad comes from New Zealand."

(iii) The total value of the gold raised in New Zealand since 1857 amounts to £60,000,000. "Moreover, it is found under all sorts of conditions; pure, in lumps, loose among the gravel; in scales or particles in the sand of rivers; in nuggets or rough pieces in holes among stones or huge boulders; mixed pell-mell with the spoil of rivers backed up by the sea; in fine dust, mixed with black-steel sand, thrown up on the beach from the bottom of the sea, during storms; in veins, or specks or needles, in the very substance of quartz rocks, often invisible to the naked eye when most plentiful; in ragged patches in rotten stone, crumbling to the touch; combined with silver and all sorts of other minerals; lying on the surface of the ground as if somebody had just spilt it there out of his pocket; fixed in the rifts of rocky gorges of thundering torrents: cropping out in rough ridges of quartz reefs on the tops of hills; hidden half a mile into the bowels of a mountain and five hundred feet below the surface of the earth. The distribution of gold is one of the most puzzling phenomena of nature; and nowhere is it more remarkable than in New Zealand." . . . "It is not a very uncommon thing for pieces of gold to be found in the crops of fowls, especially ducks, shovelling about for food at the bottom of creeks; and quite a good 'prospect' has been got among the ballast of a ship which had been loaded from a shingle beach many miles from any known auriferous indications."

(iv) There are extensive **coalfields** in many parts of New Zealand. The provinces of Auckland, Nelson, and Otago are particularly rich in coal. At the Mount Rochfort



mines the seams are from 10 to 40 ft. thick ; and this coal-field is estimated to contain 140 million tons of the very best bituminous coal.—There is a good deal of **silver** in the colony. “No iron-mines are at present worked, though almost every known variety of iron ore has been discovered in the colony ; the workings being limited to the black sands, which occur plentifully on the coasts.” There are large **petroleum** deposits in the Taranaki District in the North Island ; and these are situated on the coast.

(v) “It now supplies two-thirds of the consumption of the colony, and would supply the whole but for the convenience of importing back cargoes of cheap coal from New South Wales in exchange for farm produce ; and it is already largely exported, not only to the neighbouring colonies, but to India and China. It is beginning to be realised, in fact, that New Zealand is destined to be the colliery of the southern hemisphere.”

(vi) The chief ports are : (a) In the North Island : **Auckland, Napier, and Wellington** ; (b) in the South Island : **Nelson and Dunedin**.

(vii) **Railways** connect all the large towns in each island. In the south island east and west are connected by a line across the Alps from Greymouth to Christchurch.

**6. A Contrast.**—“The advantage, which will be the making of New Zealand, is that of variety of production, which she possesses in a higher degree than even Queensland, and which must always cause her to be rich through whatever momentary depression she may pass. Sheep-country, cattle-country, minerals of every kind, timber, fruit—all the productions of the whole of the Australian colonies and others which they do not afford, are found united in New Zealand. Her coal is not placed where it is most wanted, but, nevertheless, her steam-coal is excellent ; gold still exists, probably in large quantities ; and the other minerals are all present, and will undoubtedly in time begin to yield their harvest. . . . Substantially, it may be said that New Zealand, like Australia, is inhabited by the people of the United Kingdom shaken together, and that the New Zealand people are as intelligent as the Australians.”

“Physically, it may be said that there is absolutely no resemblance between New Zealand and Australia except in the fact that gold and wool are produced in each. We find, of course, in New Zealand much that is common to New Zealand and to Australia, but common also to these and the Canadian Dominion—much that is generally colonial: blackened stumps about the fields ; the absorption of the community in agricultural or pastoral pursuits ; good fellowship ; the manliness of the men ; the plentiful, perhaps exaggerated, use of tea ; even the slang, descending as it does from the diggers' tongue, first born in California about 1850 : but nothing can be more complete than the contrast between Australia and New Zealand. Marcus Clarke has told us that weird melancholy is the dominant note of Australian scenery, which is true enough, for the Australian landscape is as lonely, as melancholy, and as solemn as the



Roman Campagna, with the added weirdness of strange bark-shedding trees, and of uncouth beasts and birds. New Zealand is wholly different—severe and frowning in the south, open and alluring in the north, with a bright Polynesian loveliness. Australia is, as we have seen, in summer a land of dry rivers, brown grass, yellow lurid glare, and brassy sun; and in the greater part of winter a land of blue sky and soft smoky haze. New Zealand in summer may resemble parts of Australia in winter, but she has a real winter in her South Island, and a wet winter in her extreme north. The west coast of the middle or South Island, whence come the New Zealand coal and gold, is a country of constant rain, of glaciers, and of tree-ferns, and chattering parrots, inexpressibly distinct from the dried-up Australian gold-fields of Sandhurst. South Central Australia has the climate of Greece; while New Zealand, owing to its enormous length from north to south, has, like Japan, and for the same reason, all the climates of the world except the dry brilliancy of Australia or of Greece. New Zealand, which is all but tropical at the Bay of Islands, is Scotch at Invercargill.”—SIR C. DILKE.

7. **Towns.**—There are only four towns in New Zealand with a population of over 20,000 inhabitants. These are **Auckland**, the largest, and **Wellington** in North Island; **Dunedin** and **Christchurch** in the South Island.

(i) **Auckland** (109) stands on an excellent harbour in the beautiful Gulf of Hauraki. It is the largest city in New Zealand, and was at one time the seat of Government.

(ii) **WELLINGTON** (72) is the capital of New Zealand. It stands on Cook Strait, about 1200 miles from Sydney.

(iii) **Dunedin** (66), the capital of the old province of Otago, is the largest commercial city in the colony. It is inhabited chiefly by Scotchmen.

(iv) **Christchurch** (83), the “City of the Plains,” is the capital of the province of Canterbury. It has a beautiful situation on the river Avon. Its port is **Lyttelton**.

“About one-third of the Province of Canterbury is a vast plain, sloping gently down from the mountain-ranges to the sea, forming the celebrated Canterbury Plains.

“It resembles the best English climate, though drier, free from fogs, and far less exposed to winter frosts. This region enjoys the cool and healthy breezes from the snowy ranges of the interior and from the polar icebergs. The atmosphere is doubtless always agitated, the phenomenon of a perfect calm being here unknown, yet the effect, so far from being injurious, is actually beneficial in strengthening the nervous system.”

(v) The population of the whole of New Zealand is about 1,000,000 (more than the population of Glasgow), of whom about 49,000 are Maoris. The Maoris are not a native race, but came originally from some island in Polynesia.

(vi) Mr. Anthony Trollope says of **Nelson**—“The site is, I think, as lovely as that of any town I ever saw. Merely to breathe there, and to dream, and to look around, was a delight. Every house was neat and pretty. The summer heats are not great, and all English fruits and grass and shrubs grow at Nelson with more than English profusion.”

(vii) “Nearly every house has some little land about it, and this, however small, is generally made into a garden. The cultivation of trees, flowers, and vegetables is the favourite resource of the leisure of all classes, and in most of the towns and villages

the gardens about the dwellings are a source of pride to the owners and of pleasure to the passers-by."

(viii) "Beef, mutton, and pork, as good as can be got in the world, are sold at from 1d. to 4d. or 6d. per lb. ; but by taking part of a carcass, meat, especially mutton, can be had much more cheaply."

(ix) "There is no violence anywhere in New Zealand, and very little brutality or coarseness. Domestic institutions are everywhere firmly established and highly valued, and there is no part of the colony where a woman or a child may not safely venture, with the certainty of being well treated."

8. **Other Islands near New Zealand.**—The island at the extreme south of South Island is called **Stewart Island**. It is nearly half the size of Cheshire.—With a very irregular coast-line, its numerous indentations provide a large number of excellent harbours. There is much valuable timber in the forests ; the sea near the coast abounds with fish ; and it produces excellent oysters.—**The Chatham Islands**, which lie 250 miles to the east of New Zealand, are at present used for the breeding of sheep and cattle to supply the crews of whaling ships. The largest island consists mostly of volcanic rock ; the forests—with countless trees, shrubs, and ferns—are luxuriant ; and the animals resemble those found in New Zealand.—**The Auckland Islands**, which lie 250 miles south of Stewart Island, are uninhabited. They are, however, visited by whalers ; and stores of provisions are kept on them for the benefit of shipwrecked crews. Basaltic rocks and greenstone are found everywhere ; and "some of the basaltic columns are 300 ft. high, and highly magnetic." Violent gales of wind and storms of rain harass these islands ; but "flowers equal in brilliancy to those of tropical or Alpine regions" grow here ; and in the valleys the trees grow to a great height.—**The Kermadec Islands** lie about 600 miles north-east from New Zealand. Many settlers are at present proceeding from Auckland to Sunday Island—a well-wooded isle, which is the largest of the group.

(i) By a royal proclamation of 1901, the **Cook or Hervey Islands** were included in the colony of New Zealand.

(ii) "**Antipodes Island** is really a small group of rocky islands, the largest more than 1000 feet high, and having perpendicular cliffs all round from 200 to 600 feet high with an immense cave at the NW. cape. It is covered with a vegetation of long grass, fern, or scrub."

## THE CONDITION OF NEW ZEALAND

1. **Area** . . . . . 104,471 square miles

This is about half the size of France.

2. **Population** . . . . . 1,070,910

(i) This includes about 49,000 Maoris.

(ii) Most of the Maoris live in the North Island.

3. **Exports (1912)** . . . . . £21,770,000

(i) By far the largest export is wool—over £7,000,000.

(ii) Next comes frozen meat to the amount of about £4,000,000.

(iii) In the third place come butter and cheese.

4. **Imports (1912)** . . . . . £20,976,000

(i) The chief article of import is clothing.

(ii) The next is iron and steel goods; and in the third place comes sugar.

5. **Manufactures** . . . . . Small, but growing

(i) There are about 40,000 hands employed in manufactures.

(ii) The chief manufactures are of a local kind—such as meat freezing and preserving, wool-scouring, and butter and cheese making.

(iii) But there are flourishing tanneries, boot and clothing factories, and iron and brass works.

6. **Trade with Great Britain (1912)** . . . . . £29,360,000

(i) In this trade about £16·8 millions are for exports.

(ii) About £12·4 millions are for imports from Great Britain.

7. **Communications (internal)** . . . . . Excellent

(i) There are over 2800 miles of railway in the two islands.

(ii) There are over 12,000 miles of telegraph line. The telephone is also largely used.

(iii) All the large towns are well supplied with tramways.

8. **Communications (external)** . . . . . Excellent

There are lines of steamers to Sydney and Melbourne in Australia; and to Victoria and San Francisco in North America.

## BRITISH POSSESSIONS IN POLYNESIA

1. **Introductory.**—Polynesia is the name sometimes given to all the islands in the Pacific Ocean. But more correctly they are divided into three groups: **Melanesia**, **Micronesia**, and **Polynesia** proper. **Micronesia** is the region of Small Islands in the west, north of New Guinea; **Melanesia**, or the Islands of the Blacks, lies between New Guinea and Fiji; and **Polynesia** includes the Many Islands strewn over the rest of the Ocean. Great Britain has possessions in all three divisions.

*Polynesia* means the "Region of Many Islands," from the Greek *polys*, much, and *nesos*, an island. *Melanesia* means the "Black-Island Region" (*melas*, black); and *Micronesia*, the "Region of Small Islands" (*mikros*, small).

"No distinction is so continually dwelt upon in South Sea talk as that between the 'low' and the 'high' island, and there is none more broadly marked in nature. The Himalayas are not more different from the Sahara.

"On the one hand, and chiefly in groups of from eight to a dozen, **volcanic** islands rise above the sea. Few reach an altitude of less than 4000 feet; one exceeds 13,000; their tops are often obscured in clouds; they are all clothed with various forests, all abound in food, and are all remarkable for picturesque and solemn scenery.

"On the other hand, we have the **atoll**; a thing of problematic origin and history; rudely annular in shape, enclosing a lagoon; rarely extending beyond a quarter of a mile at its chief width; often rising at its highest point to less than the stature of a man—man himself, the rat, and the land-crab its chief inhabitants; not more variously supplied with plants; and offering to the eye, even when perfect, only a rim of glittering beach and verdant foliage, enclosing and enclosed by the blue sea."—STEVENSON'S "In the South Seas."

2. **Melanesia.**—The chief British possessions are the **Solomon** and **Santa Cruz Islands**, and the south-eastern portion of **New Guinea**, or **Papua**.

(i) The **Solomon** and **Santa Cruz** groups are a British protectorate. They lie east of New Guinea. They produce and export **copra**, the chief product of most of the Pacific Islands.

(ii) **British New Guinea** amounts to about 90,000 square miles, and may have a population of 400,000. Its administration is controlled by the Australian Common-

wealth. The country is mountainous and well-wooded, and the **Fly River** has been proved to be navigable by steam-launches for 500 miles. The coast region is a waste of mangrove swamps; and the climate, everywhere hot and generally wet, is on the coast very malarious and unhealthy.

(iii) The resources of British New Guinea are not yet developed. The forests contain splendid timber (cedar, ebony, and sandalwood); tropical plants, like the banana, sago-palm, sugar-cane, and rubber-tree, are abundant; there is gold in the country; and pearl-shell and *bêche-de-mer* are found round the coasts. At present the chief exports (which are all small) are *bêche-de-mer*, copra, sandalwood, and a little rubber and gold. The trade is carried on with Queensland and New South Wales. **Port Moresby**, which has a good harbour, is the seat of government.

(iv) The typical **Papuan** is generally dark in complexion and has a huge frizzly mop of hair. He is often a cannibal and head-hunter, and inter-tribal war is common. Hence for defensive purposes the Papuan's house is always built on stakes and as often as not in the water.

**3. Polynesia.**—The most important British possession is the group of the **Fijis**, which are typical "high" islands. Other possessions are the **Tonga**, or **Friendly Islands**; the **Cook Islands**; and **Pitcairn Island**. All these small groups produce practically nothing but copra.

(i) **The Fiji Islands** lie a little north of the Tropic of Capricorn, about 2000 miles east of Queensland. There are more than 200 islands; about 80 are inhabited. The largest is **Viti Levu**, a little more than two-thirds the size of Yorkshire; the second largest is **Vanua Levu**. Both are mountainous (the highest peaks about 5000 ft.), of volcanic origin, well-wooded, and extremely fertile. The eastern or "weather-side" of the islands is one dense mass of tropical vegetation, one unbroken green mantle of huge trees, countless creepers, and other plants. The lee side is a grassy country dotted with screw-pines. The Fijians are a dark-coloured, frizzly-haired, bearded race, tall, muscular, and well-formed. They were once cannibals. The principal products of the islands are sugar, copra, and bananas.—The capital is **Suva** (on Viti Levu); the only other town of any size is **Levuka**.—There is regular steam-communication to New Zealand, Australia, Canada, and Great Britain.

(ii) **Pitcairn Island** lies just under the Tropic of Capricorn on longitude 130° W. Here in 1789 some of the mutineers of the *Bounty* with their Tahitian wives settled themselves, remaining unknown to the outside world for twenty years. In 1856 they were removed to **Norfolk Island**, but in a few years many of them returned to Pitcairn, where they and their descendants still remain.

**4. Micronesia.**—The chief British possessions in Micronesia are the **Gilbert group**, the **Lagoon** or **Ellice Islands**, the **Phoenix Islands**, and the **Tokelau** or **Union group**. Nearly all belong to the "low" type. They produce some copra and pearl-shell.

These islands are administered by a High Commissioner, who is also Governor of the crown colony of the Fijis.

## THE CONDITION OF FIJI

1. **Area** . . . . . 7435 square miles

(i) This is equal to five **Kents**.

(ii) The largest island is **Viti Levu** (4256 square miles—about the size of **Jamaica**).

(iii) The next largest is **Vanua Levu** (2600 square miles—almost exactly the size of **Perthshire**).

2. **Population** . . . . . 148,000

(i) Of this number 87,000 are **Fijians**.

(ii) Only 4000 are **Europeans**, and the rest chiefly Indian coolies.

3. **Exports** (1912) . . . . . £1,058,960

The chief exports are sugar, fruit, and copra.

4. **Imports** (1912) . . . . . £940,000

The chief imports are drapery, breadstuffs, hardware, and machinery.

5. **Manufactures** . . . . . None

6. **Trade with Great Britain** . . . . . Small

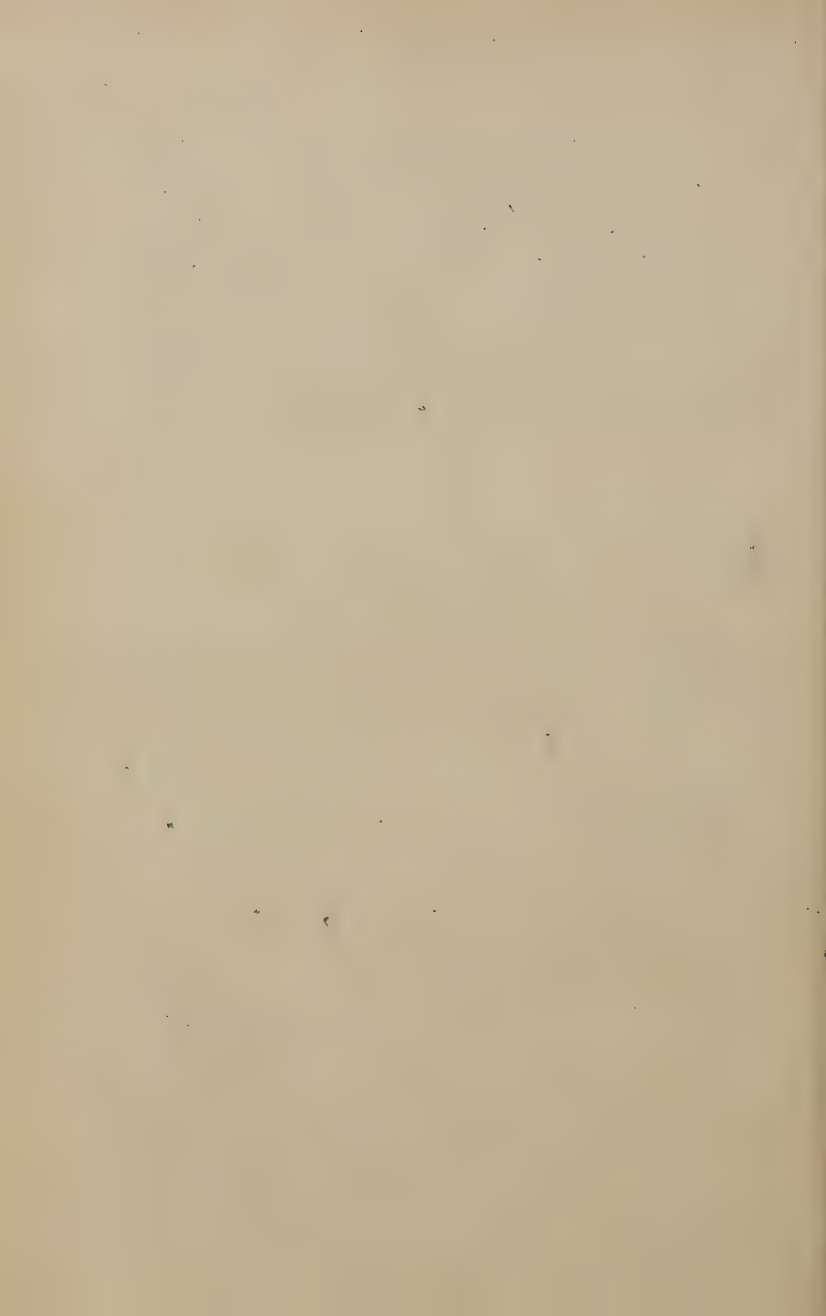
Two-thirds of the total trade is done with British colonies—Australia particularly.

7. **Communications (external)** . . . . . Good

(i) There are regular steamers between **Fiji** and **New Zealand**, **Australia** and **Canada**.

(ii) Of the merchant vessels that call at the ports of entry, 96 per cent. fly the **British** flag.





# VOCABULARY

**Ait**, an island in a river or lake.

**Alfa**, a North African variety of esparto.

**Alluvium** (adj. *alluvial*), a deposit of fine particles of earth, rocks, minerals, etc., rubbed away and washed down by the action of water. Most flat lands are so formed. It was in alluvial deposits that gold was first found in Australia and elsewhere. See *Detritus*.

**Amber**, the fossilised gum of extinct trees. It is found on the shores of the Baltic, and is made into mouthpieces for tobacco-pipes.

**Ambergris** (French *ambre gris*, "grey amber"), a morbid substance produced by the spermaceti whale, and usually found floating at sea. It is of fragrant odour, and of value as a material in perfumery.

**Atolls**, coral islands in the Pacific, consisting of a circular reef which encloses a lagoon. See *Coral*.

**Avalanche**, a mass of snow or ice loosened from a mountain and sliding or falling suddenly into the valley below. (French *aval*, to descend; Latin *ad*, to, and *vallis*, a valley.)

**Bamboo**, a kind of tree-grass growing in tropical countries. There are seventy different species: and almost as many different purposes to which they can be applied; such as building, basket-making, paper-making, etc.

**Banana**, a tropical and sub-tropical fruit, much grown for food. It is the most prolific of all the fruits of the earth. It is 131 times more prolific than wheat.

**Banyan**, a species of fig. Its branches send down shoots into the ground, which take root and go on increasing in the same way. One banyan "has been known to shelter 7000 men."

**Baobab**, one of the largest trees in the world. Its stem is often 30 feet in diameter. It produces an acid pulpy fruit.

**Basalt**, an igneous rock, found often in the form of regularly-shaped columns. The pillars of Fingal's Cave (in Staffa), and of the Giant's Causeway (in Ireland), are composed of basalt.

**Bêche-de-mer**, a species of *Holothuria* of sea-cucumber. See *Trepang*.

**Bird's nests, Edible**. These are made by a kind of swallow of a gelatinous substance which the bird secretes, and found in caves along the shores of the Malay Archipelago. They are sent in great numbers to China, where soups are made from them.

**Bore**, a high wave formed in the estuary of a river by the violent rushing up of a tidal wave. Bores take place on the Ganges and other Asiatic rivers, on Brazilian estuaries, and at the mouth of the Severn.

**Brazil nuts**, the seeds of a fruit which grows in Brazil and the northern countries of South America. Each fruit contains about twenty "seeds" or nuts.

**Brazil wood**, a heavy red dye-wood of Brazil.

**Bread-fruit**, a large fleshy fruit growing in the Pacific islands, where it forms the staple article of food. It is usually eaten roasted.

**Cacao**, the chocolate-tree. It produces pods containing a great number of seeds; and the seeds, being ground, yield the powder known as *Cocoa*. This again is used in the making of *Chocolate*.

**Camel**, a ruminant (cud-chewing) quadruped. There are two species: the dromedary, which has one hump; and the common camel, which has two. The camel's power of enduring thirst and hunger makes it invaluable as a beast of burden in the deserts of Arabia and Africa.

**Camphor** is a product of the camphor-tree, found chiefly in Borneo and Sumatra. It is produced for commerce by a process of distillation from the wood; and is also found in natural masses in the cavities of the trunk and branches.

**Cañon**, a deep narrow gorge or ravine cut out, in the course of ages, by a river. The most famous is that of the Colorado; where the river flows along at the bottom of a gorge whose perpendicular sides are in some places 6000 feet in height.

**Caoutchouc**, an elastic gum, made from

the juice of several varieties of tropical plants. It is employed in the manufacture of india-rubber, waterproofs, etc.

**Capers**, the buds of a shrub growing in Mediterranean countries. They are preserved in vinegar and used as a condiment.

**Carob**, a plant growing in Mediterranean countries and producing pods known as "locust-beans." Some say that these were the "locusts" eaten by the Baptist.

**Cassava**, a preparation of *manioc*.

**Catchment-basin**, the whole area of country which "catches" the rain and contributes water to a river or lake.

**Caviare**, the roe of the sturgeon dried and salted; considered a great delicacy.

**Cinnamon**, the inner bark of a tree grown in Ceylon, on the Malabar coast, etc. It is an aromatic and somewhat pungent spice.

**Cinque Ports**. These were five naval ports established on the south coast of England, for defence against France. They were bound to provide ships at their own expense, and in return enjoyed special privileges. The official who controlled them was called "Warden of the Cinque Ports." The original five were Dover, Hastings, Hythe, Romney, Sandwich. To these were afterwards added Winchelsea and Rye. (French *cinq*, five.)

**Cloves**, the buds of an evergreen shrub, native to the Moluccas. They are dried, and used as a strongly aromatic spice. (Latin *clavus*, a nail.)

**Cochineal**, a curious insect, which feeds on the cactus. It is found chiefly in Mexico. The bodies of the female insects are dried and used for making red dyes.

**Cocoa-nut**, the large nut of the cocoa-palm. The kernel of the nut is eaten, the "milk" which it contains is drunk; the outer husk is made into cocoa-nut matting; every part of the tree is used. An oil is obtained by squeezing the kernel.

**Coffee**, the seeds of a low shrub growing in Arabia and Abyssinia. The flowers of the shrub are pure white and delightfully fragrant. The fruit resembles a small cherry in size and colour; each fruit contains two "coffee-beans" or nibs, which have to be roasted before using.

**Coir**, a yarn manufactured from cocoa-nut husk. It is made into sail-cloth, and

especially into rope, which is of great strength, and all the stronger from being soaked in salt water.

**Copal**, a resinous varnish produced from several different tropical trees. The trees producing it are found in India, Brazil, and Madagascar.

**Copra**, the dried kernel of the cocoa-nut, from which oil is expressed. Copra is the chief product of the Pacific Islands.

**Coprolites**, the fossilised dung of extinct lizards, etc. Coprolites are found in coal and lias. (Gr. *kopros*, dung; *lithos*, a stone.)

**Coral**, a substance consisting chiefly of carbonate of lime, secreted by small marine animals; and by them built up into barrier reefs, atolls, etc. Coral is found in greatest abundance in the Pacific and Indian Oceans.

**Cordillera** (Lat. *chorda*, a string), a term specially applied to the Andes range, but also generally used as meaning a long ridge of mountains.

**Cork**, the outer bark of the cork-tree, a kind of oak grown largely in the Peninsula. It is the material of which "corks" are made.

**Cotton**, the fibre which adheres to the seeds of the cotton-plant. This plant is cultivated in the Southern United States, in South America, in India, and on the shores of the Mediterranean. The fibre is woven into cotton cloth.

**Dates**, the fruit of a kind of palm which flourishes in Persia, Arabia, and the North of Africa. They grow in large bunches, each bunch weighing over twenty lbs. They are eaten fresh, or preserved by drying.

**Detritus**, a mass of rock-particles worn away by the action of water, weather, the grinding of one rock upon another. Sea-sand, for instance, is detritus, produced chiefly by the last-mentioned agency. See *Alluvium*.

**Diamond**, the most precious of gems. Diamonds are mined chiefly in Brazil, South Africa, and India. They are very hard, transparent, and brilliant.

**Dodo**, a large and clumsy bird, whose wings were useless for flying. It was formerly found in the island of Mauritius, but is now extinct.

**Dolomite**, a building-stone composed of carbonate of magnesia and carbonate of lime. The Houses of Parliament at Westminster are built of dolomite.

**Doonab**, in India, a tract of country between two rivers. *Cp.* *punjab* = "country of five rivers." *Doo* is the same word fundamentally as the Lat. *duo* and the Eng. *two*; while *ab* is the same as *Av*, in *Avon*, and means "water."

**Dugong**, a marine mammal of the Indian Ocean, and more especially of the East Indian Archipelago. Its flesh is good to eat. The dugong comes to the surface at intervals to breathe, and shows a good deal of its body. This is supposed to be the origin of the stories of mermaids.

**Durra**, Indian millet. It is largely grown in Arabia and in Asia generally, and also in the south of Europe, where it is one of the chief food-grains.

**Ebony**, a very valuable hard black wood obtained from Ceylon and the East Indies. It takes a fine polish, and is used for dainty work, such as inlaying.

**Esparto**, a grass much used in the manufacture of paper. It grows chiefly in the south of Spain and the north of Africa.

**Eucalyptus**, the Australian "gum-tree," of which there are many different species. They grow to a great size and yield fine timber. Their leaves, instead of lying parallel to the ground, hang at right angles to it.

**Euphorbia**, a large, fleshy, leafless shrub or tree, found in the Tropics. There are about 1000 species, all containing a milky, acid juice. There are allied species in Britain, popularly known as *spurges*.

**Facial angle**, the angle made by a straight line from the nostril to the ear, and another straight line to the forehead. The nearer this angle approaches to a right angle, the greater the amount of intelligence is believed to be.

**Fakir**, a begging monk of India and neighbouring countries. The habits and dress of these mendicant religionists are filthy in the extreme. They subject themselves to the severest mortifications.

**Fetich**, any object or animal regarded as the abode of a deity, and worshipped as such. Fetichism is the religion of much of the West African Coast.

**Flax** (Lat. *linum*), a common plant occurring almost all over the world. Its fibre is used for making linen and cambric. From its seed is obtained "linseed" oil. Riga and Holland send us the best seed.

**Fumarole**, a smoke-hole in a volcano or a sulphur-mine.

**Gambier**, a substance obtained from an East Indian plant and employed as a light-brown dye.

**Gavial**, the "Gangetic" crocodile. It is web-footed and has a very long mouth.

**Geyser**, a jet of hot water and steam rising periodically from a crack or fissure in the earth and shooting to an immense height in the air. Geysers are probably connected with volcanic activity. The most famous are those of the Yellowstone Region (in the Rocky Mountains), and those of Iceland.

**Ginger**, the rhizome, or root, of the ginger plant, which is cultivated in most tropical countries. Jamaica ginger is most highly esteemed.

**Glacier**, a river of ice, finding its way by slow degrees down a mountain-valley, till it reaches warm regions, and, melting, gives birth to rivers; or, arriving at the sea, pushes its extremity out beyond the land. These ends of glaciers, being broken off by the action of the waves, and floating away, are known as *icebergs* (=ice-mountains).

**Gneiss**, a rock composed of the same elements as granite, viz. quartz, felspar, and mica. The difference is that in gneiss the component minerals are in separate layers, while in granite they are jumbled together.

**Guano**, the excrement of sea-birds, found in immense deposits on the shores, rocks, and islands of South America. Guano is very valuable as a manure.

**Gypsum**, a mineral somewhat resembling chalk. When subjected to heat, it is known in commerce as Plaster of Paris. The hill of Montmartre, near Paris, is entirely composed of gypsum.

**Hansa**, a league formed by a number of German cities, in the 12th century, for the purpose of defending commerce. Other cities, of different nations, joined the league. Hamburg was a Hanse Town.

**Hemp**, a plant with a wide range, being particularly cultivated in Russia. From its fibre is manufactured sail-cloth and rope. From the Indian hemp is procured the narcotic drug *bang* or *hashish*.

**Herring**, one of the most familiar and useful fishes of northern latitudes. It has

been a source of great wealth to our fishermen, who have been engaged in the herring-fishery since the 8th century. Man, bird, and fish prey upon them; but their number never grows less.

**Ibex**, a tribe of animals with hollow horns, and not unlike goats. Different varieties are found in the Alps, the Pyrenees, and the Caucasus. The *Steinbock* is a kind of ibex.

**Iceberg**. See *Glacier*.

**Indigo**, a dark-blue dye, obtained from an Indian plant. (Span. *Indigo*; Lat. *Indicus*, Indian.)

**Isinglass**, pure gelatine. Isinglass is made from the air-bladder of the sturgeon and other fresh-water fishes. It is much used in confectionery.

**Isotherm**, a line on a map passing through places that have the same average temperature. (Gr. *isos*, equal; *thermē*, heat.)

**Jute**, a fibre obtained from the inner bark of certain Indian plants. It is used chiefly in carpet-making and for sacks.

**Kangaroo**, an Australian marsupial (or pouch-bearing animal). It carries its young in a kind of pouch or sack. The kangaroo is a large marsupial, with short fore-legs, long hind-legs, and a strong tail. The hind-legs and the tail are used in leaping along the ground.

**Karoo**, a South African desert. Karroos are usually table-lands with a clay soil. In the rainy season they cease to be deserts, and are covered with grass.

**Lagoon** (i) a shallow marshy lake, usually near, and discharging into, the sea; (ii) the sheet of water enclosed by an atoll. See *Atoll*.

**Landes**, plains along the French coast of the Bay of Biscay, sandy, and covered with heath and broom.

**Lichen**, a plant somewhat resembling a moss. As a rule lichens are greyish in hue, and found on rocks and tree trunks. The best-known varieties of lichen are reindeer-moss, which is the reindeer's only food in winter, and Iceland-moss, a valuable tonic.

**Locust**, an insect related to the grasshopper. In Asia, Africa, and America they fly in countless armies, and when they have settled down upon a district, do not leave it till every green blade and

leaf has been devoured. Their bodies are eaten in some countries; and it may have been these insects that formed the food of John the Baptist (*but see Carob*).

**Logwood**, a Central American and West Indian tree. Its timber is very compact and heavy, and of a red colour. It is used as a dye.

**Lucerne**, a pasture and forage plant of much value to horses and cattle. It grows in the chalk districts of France and England, and in Australia and Canada.

**Macaroni**, a paste of wheaten flour made into hollow pipes or tubes, and dried. It is an article of food, chiefly in Italy, from whence it is exported to other countries.

**Mahogany**, a fine West Indian and Central American tree. Its wood is very hard and durable, takes a fine polish, and is much used in making furniture.

**Maize**, or Indian corn. A grain very largely grown in America, and also in many countries of Asia, in Africa, and in the south of Europe. The grains grow in parallel rows (like strings of beads) on "cobs" a foot long.

**Mangrove**, a tree found in the East and the West Indies. Its bark is used for tanning and dyeing, and its fruit is eaten or made into wine.

**Manioc**, an American and African plant, with fleshy tuberous roots, from which *cassava* and *tapioca* are made. Stanley says: "All the blacks from Banana to Stanley Falls live on it."

**Millet**, a food-grain of China, the East Indies, Arabia, Syria, etc. It is also grown in the south of Europe.

**Molasses**, a syrup produced during the manufacture of sugar from the cane. Treacle is produced from the refining of the sugar.

**Nutmeg**, the kernel or nut of a fruit which grows in the East Indies. It is one of the best-known spices.

**Oasis**, a fertile spot in a desert; caused by the presence of a spring or well.

**Opium**, the thickened juice of a kind of poppy which is grown in Asiatic Turkey and India. It is a powerful narcotic, and is of great use as a medicine. *Laudanum* is a liquid preparation of opium.

**Pachyderms**, or thick-skinned animals

(*Gr. pachys*, thick; *derma*, skin): the elephant, rhinoceros, tapir, etc.

**Palm**, a tree of which there are about 600 different species; almost every one of which is useful, in one way or another, to man. The date-palm, the cocoa-nut-palm, the sago-palm, and the cabbage-palm are the best-known and most valuable species.

**Palmetto**, a kind of palm that grows largely in the West Indies and in the southern parts of North America.

**Pampas**, the rolling, grassy, treeless, plains of the La Plata Basin.

**Pearl**, a valuable jewel, which is really an excrescence growing in the shell of a species of oyster and sometimes in other molluscs. The best pearl-fisheries are those of Ceylon and the Bay of Bengal.

**Pearl-ash**, the commercial name for carbonate of Potash. See **Potash**.

**Pepper**, a pungent spice made from the berry of a shrub which grows largely in the East Indies and in the tropical parts of America.

**Petroleum**, mineral or rock oil. A kind of naphtha obtained from the earth by boring wells. Pennsylvania and other carboniferous regions of the United States, and also the shores of the Caspian, yield much petroleum. (Lat. *petra*, a rock; *oleum*, oil.)

**Plantain**, the fruit of the plantain-tree. It resembles the banana, except in being red in colour. The plantain is a staple food in many tropical countries.

**Plumbago**, another name for *graphite* or *black lead*. A soft mineral from which pencils are made, and which is also used for polishing iron grates, etc. The best plumbago comes from Ceylon.

**Pomegranate**, the fruit of a tree which is probably native to Persia. The pomegranate is a pulpy, slightly acid fruit, containing many seeds.

**Potash**, a vegetable alkali obtained from the ashes of plants, by pouring water on and through the ashes, and then evaporating the water. See **Pearl-ash**.

**Prairies**, the boundless natural meadows of the Mississippi Valley and the western United States and Canada.

**Prairie-dog**, a kind of rodent (or gnawing animal) living in "villages," or common

burrows, on the prairies. These animals are related to the squirrel, and are only called "dogs" because they make a kind of barking sound.

**Quartz-reef**, a technical mining term for the masses of quartz rock from which gold and other minerals are procured. The quartz is crushed in a mill, and the gold is then recovered by a process of washing.

**Raisin**, a dried grape obtained from the south of Europe. The smaller varieties of grapes when dried are known as *currants* (a corruption of the word *Corinth*).

**Reindeer**, a kind of deer found in the north of Europe, Asia, and N. America. In Lapland it is used to draw sledges.

**Rhea**, three-toed ostrich of S. America.

**Rice**, the chief food-grain and the chief food of millions in India and China. Also grown in the S. States of America.

**Rolling-stock**, that part of the property of a railway which is not stationary or fixed; such as the engines, carriages, etc.

**Run**, a technical Australian term for a cattle- or sheep-farm. "Runs" in America are called "Ranches."

**Runa**, a desert. (The name is only found in the "Runn of Cutch," in India.)

**Saffron**, a species of crocus, with purple flowers. The saffron of commerce is prepared from the roots. It is of a deep orange colour, and is used by perfumers, druggists, and dyers.

**Sago**, the pith of the sago-palm, an article of food.

**Sandal-wood**, a low tree native in the East Indies, West Australia, etc., and somewhat resembling privet. Its wood is most fragrant, and much used in ornamental work.

**Sardine**, a small fish of the clupeoid (or herring) kind, preserved in oil.

**Sargasso Sea**, the name of a part of the Atlantic, within the greater currents, which is covered with floating gulf-weed.

**Savannah**, the name for a prairie in the tropical regions of N. America. See **Prairie**.

**Screw-pines**, a curious tree which flourishes in the East Indies, New Guinea, and parts of Australia. It has roots coming out from the trunk above the ground. Several parts of the tree are of use.

**Seal**, an amphibious mammal, most



abundant on the coast of Greenland and the NW. coast of N. America, but sometimes visiting the coasts of Great Britain; valuable for its fur and its blubber.

**Selvas**, the forest-covered plains of the Amazon. (Lat. *silva*, a wood.)

**Sericulture**, the rearing of silk-worms.

**Shale**, slate clay. Shale is generally found in the neighbourhood of coal. It sometimes yields paraffin-oil.

**Simoom**, a scorching wind, laden with sand, which blows in Africa and Arabia. It is generated in the deserts.

**Sirocco**, the name under which the simoom is known in Italy, where its effects are felt.

**Solfatara**, a kind of volcano; generally a mere hole in the earth, which sends out sulphurous smoke.

**Springs** are supplies of water which have accumulated underground; and which, when the natural basins that they occupy are filled to overflowing, force their way upwards and gush out from the surface of the earth. Springs are either constant or intermittent, either hot or cold; and they are sometimes impregnated with minerals which make them medicinally valuable. A spring is frequently the source of a river.

**Stalactite**, a natural pendant, composed of carbonate of lime, hanging from the roof of a cave or the arch of a bridge.

**Steppes**, wide treeless plains (barren except in spring) of south-eastern Russia and of Siberia.

**Stream-tin**, rounded masses or grains of tin, occurring in alluvial soil.

**Sugar**, the well-known substance obtained (i) from the juice of the sugarcane; (ii) from the beetroot, cultivated extensively in France and Germany for the purpose. In the United States and Canada sugar is also manufactured from the sap of the maple-tree.

**Tapioca**, an article of food. See **Manioc**.

**Tar**, a viscid, black liquid obtained from wood, coal, peat, and shale. The best wood-tar comes to us from Stockholm and Archangel.

**Taro**, a plant of the Pacific islands,

whose roots are made into a kind of flour, and whose leaves are eaten as a vegetable.

**Tea**, the dried leaves of a shrub grown in India and China.

**Trap-rock**, a geological term to denote igneous rock (=rock which has been subjected to the action of fire).

**Trepang**, the sea-slug. It is found on coral reefs in the East Indian Archipelago, dried, and sent to China, where soup is made from it.

**Trogon**, a tropical race of birds, with the richest plumage, and tails often three feet in length, found both in the Old and the New World. Central America and the Amazon Valley yield many species.

**Truffles**, an underground fungus, considered a great delicacy, and found in the south of England, in Italy and France. Dogs are trained to discover them by the scent, as there is no part of them visible above the soil.

**Tundras**, flat and marshy plains in N. Siberia, frozen hard nearly all the year.

**Turpentine**, a kind of resin or gum obtained from the stems of different varieties of pine. It is useful for making varnishes; used also in medicine.

**Typhoon**, hurricane of China, Japan, etc.

**Tsetse**, a South African insect, whose bite, though not injurious to man or to wild beasts, is fatal to domestic animals.

**Vanilla**, an aromatic plant of tropical regions, whose fruit yields a fragrant oil, used in confectionery for flavouring.

**Volcano**, a mountain which sends forth smoke, flames, showers of ashes, and streams of molten minerals (lava).

**Wady**, in Arabia, etc., a watercourse, which in the rainy season is a river, but for the rest of the year a dry channel.

**Walrus**, a northern marine animal, whose tusks yield a kind of ivory, whose skin is made into leather, and whose blubber furnishes oil.

**Whale**, the common name for mammals of the cetaceous order. The most common varieties are the Greenland whale, valuable for its oil and whalebone, and the cachalot or sperm-whale, which yields sperm-oil, ambergris and spermaceti. The latter chiefly inhabits the Pacific Ocean.

# INDEX

*Place-names* are in *italics*; **productions, animals, and commodities** (natural or otherwise) are in **thick type**; other matters in roman (ordinary) type. Figures in thick type (e.g. *Aberdeen*, 94) refer to more important notices of the subject. Entries of two or more words are under the first word—e.g. *Orange River Colony*, *Graaff Reinet*, *Taj Mahal*, *Cader Idris*; but if the first word is generic, the entry is under the third or second word—e.g. *Clyde*, *Firth of*; *Thames, R.*; *St. Lawrence, G.*; *Guardafui, C.*

The **Vocabulary** (pp. 331-336) should be consulted for a detailed account of certain commodities and geographical terms.

**Abbreviations** used in the Index:—

Ag. = Agency.	Hist. = history.	Pop. = population.
B. = Bay.	Hd. = head.	Prod(s). = products.
Brit. = British.	H(s). = hill(s).	Protect. = protectorate.
C. = Cape.	I. = island.	R. = river.
Chars. = characteristics.	L. = lake, loch or lough.	Ra. = range.
Cl. = climate.	Manu. = manufactures.	St(s). = state(s).
Co. = county.	Mt(s). = mountain(s).	Str. = strait.
Coms. = communications.	P. = pass.	Tn(s). = town(s).
Dist. = district.	Pt. = point.	Tr. = trade.
Div(s). = division(s).	Phys. = physical.	U.K. = United Kingdom.
G. = Gulf.	Pl(s). = plain(s).	Vall. = valley.
Govt. = government.		

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